Exhibit 149, part 2

A Dennis
HFS-125

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
Rockville MD 20857

June 29, 2001

Mr. Richard J. Zazenski
Director, Product Safety
Luzenac America, Incorporated
8985 E. Nichols Avenue
Englewood, Colorado 80112

Dear Mr. Zazenski:

Thank you for your June 11 letter requesting a meeting to discuss your concerns about cosmetic talc and asbestos fibers. While I am unable to meet with you personally, staff in the Office of Cosmetics and Colors would be pleased to arrange a meeting to address your concerns. Please contact Dr. Adele Dennis, Acting Director of the Office of Cosmetics and Colors, at 202-205-4530 to make the necessary arrangements.

Sincerely,

BA Schwetz

Bernard A. Schwetz, D.V.M., Ph.D.
Acting Principal Deputy Commissioner

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drafted:ABCrawford:HF-40:6/28/01

cc:
HF –1 (2)
HF-40 (Russ, Crawford)
HFS-1
HFS-125 (Adele Dennis)

INCOMING

See PM Email 2

Dennis, Donna A

From: Zazenski, Rich (LNA) [Rich.Zazenski@america.luzenac.com]
Sent: June 07, 2001 2:17 PM
To: Dennis, Donna A
Subject: Talc Specification

Dear Dr. Dennis:

By way of introduction, my name is Richard J. Zazenski, Director of Product Safety, Luzenac America, Inc. Luzenac is part of the worldwide Luzenac Group, the world's leading producer of talc products. Please visit our website at www.luzenac.com.

I have learned that Mr. Bill Kelly has recently spoken with you about talc and our (talc producers) willingness to work with the FDA to help formulate a cosmetic talc specification. I would like to call you in the next few days to discuss this issue, but let me take this opportunity to "put on the table" some of the options we would like for you to consider:

(1) Assuming talc (non-asbestiform) does not get recommended for NTP listing, we need to re-establish some degree of public confidence in cosmetic talc products. As such, perhaps the FDA might consider requiring cosmetic talc to meet the talc purity standards of USP and/or Food Chemical Codex. Discussing this potential with several other talc producers met with positive feedback.

(2) Additionally, we can discuss an asbestos specification option which requires that cosmetic talc "does not contain detectable asbestos" when analyzed via Transmission Electron Microscopy (TEM). I think we all recognize XRD, PCM, and PLM are simply not sensitive enough to provide complete assurance that the talc is free of detectable asbestos.

As you may know, we supply (b) (4) with all their cosmetic talc requirements. As such, we are required to employ strict quality control protocols in our manufacture as well as use TEM (independent lab analysis) for certification for the absence of asbestos. Although their talc specification is not specifically patterned after USP, their talc meets USP, EP and BP purity specifications. Perhaps their "high-standards" should become the "required" industry standard. If this will help re-establish public (and regulatory) confidence in the purity and safety of talc, then we would all welcome the requirement (I might also add that it is the policy of Luzenac that we will not sell talc products containing asbestos - and we do not entertain the argument advanced by others as to whether or not a particular fiber meets the "technical" definition of asbestos).

With regard to NTP, Luzenac firmly believes that the "science" does not warrant a talc (non-asbestiform) listing by NTP. We particularly object to

NTP's overt disregard of the findings from the 1994 ISRTP/FDA workshop on
talc. Our "public" comments are posted on the NTP website.

Thank you for this opportunity to consider the "talc" issue. I'll try to
give you a call either Friday or Monday if that is convenient.

Sincerely,

Rich Zazenski
Luzenac America
303-643-0404

FY 2001 OWH Funding Application

Part I

Principal Investigator:
Donald C. Havery
Chief, Cosmetics Technology Branch
Office of Cosmetics and Colors
HFS-127
Phone: (202) 205-4345
Fax: (202) 205-5098
Email: Dhavery@CFSAN.FDA.gov
Supervisor: Dr. D. Adele Dennis
Division Director: Dr. Sandy Bell, Acting
Office Director: Dr. D. Adele Dennis, Acting

Co-Investigator:
Stanley M. Cichowicz
Biologist
Acting chief, Microanalytical Branch
Office of Plant and Dairy Foods and Beverages
HFS-315
Phone: (202) 205-4480
Fax: 202-205-4091
Email: SCichowicz@CFSAN.FDA.gov
Supervisor/Division Director: Dr. Douglas Park
Office Director: Dr. Terry Troxell

Non-FDA Collaborators:

Organization	Names
Bain Environmental, Inc.	Laurie Bain
Bain Environmental, Inc.	Robert Schreiman

Part II

Is this project a continuation or extension of a previously/currently funded project: No

Center/ORA project #	Start date	Completion date
21956	2/1/01	2/1/02

Research involving animals: No

Research involving human subjects: No

Will a review division in FDA benefit from this project? Yes. A citizen petition was filed with the FDA in 1994 by the Cancer Prevention Coalition, requesting a warning label on talc powders such as " Talcum powder causes cancer in laboratory animals. Frequent talc application in the female genital area increases the risk of ovarian cancer."

If yes, list Center/ORA/Office/Division: CFSAN/OCAC/DSAT

Part III

Project Title: The determination of the composition of cosmetic grade talc

Project statement: Ovarian cancer is one of the leading causes of mortality among U.S. women. Epidemiological studies have linked talc use in the perineal area with ovarian cancer (1-19). Since talc is a mined product, cosmetic grade talc is a heterogeneous material and can contain other undesirable minerals such as asbestos.

Project objectives: The proposed study will examine the composition of cosmetic grade talc, focusing on the presence of asbestos. Asbestos, a known carcinogen, can be found in talc if the mining site is not carefully selected or if the talc ore is not sufficiently purified. The asbestos concentration, of currently marketed cosmetic talc are needed to clarify the role of asbestos as a factor in the cause of ovarian cancer. The National Toxicology Program (NTP) is considering talc as a possible compound for restudy. The Cosmetic Ingredient Review (CIR) recently decided to perform a separate review of talc because of the toxicological issues relating to talc use. There are few current data available on cosmetic talc composition. The data collected in this survey will be needed in order for the agency to pursue any regulatory action in the event of adverse findings by the NTP or CIR. The data collected will also assist in addressing the citizen petition's request for a warning label on talc products.

Abstract of Research Plan: Epidemiological studies have linked talc use by females in the perineal area with ovarian cancer, one of the leading causes of death in American women. Talc and asbestos, a known carcinogen, can be found together if the talc mining site is not carefully selected or if the talc ore is not sufficiently purified. The asbestos concentration of currently marketed cosmetic talc is needed to clarify the role of asbestos as a factor in the cause of ovarian cancer. Approximately 50 cosmetic talc products will be collected throughout the U.S. at retail outlets and directly from suppliers, and will be analyzed by transmission electron microscopy. Positive findings will be confirmed by x-ray diffraction.

Methods: Approximately 50 talc products will be collected for analysis, including baby, adult, and medicated talcs. Products will be purchased in the Washington, DC metropolitan area, and by FDA field personnel at retail stores from several different areas of the U.S., and directly from suppliers. By obtaining talc products from a variety of different sources, the chances of obtaining products containing talc mined from the greatest number of geographic areas will be maximized.

Products will be analyzed for composition and asbestos by transmission electron

microscopy by Bain Environmental, Inc. Any positive asbestos results will be confirmed by x-ray diffraction by another contract laboratory to be determined at a later date.

The data obtained by the contractor will be reviewed internally by Stanley Cichowicz (OPDFB). Mr. Cichowicz has previous experience in the analysis of talc for asbestos. Dr. Nancy Hepp (OCAC) will act as a reviewer of any x-ray diffraction data collected in the event that asbestiform materials are found, and x-ray diffraction techniques are use to confirm the findings. Dr. Hepp's graduate work involved the use of x-ray diffraction.

Expected Outcomes: There are two possible outcomes to this study. If no asbestos is found in cosmetic talc, then researchers studying the causes of future cases of ovarian cancer can eliminate asbestos in talc as a causative factor. If asbestos is found, then the agency will need to open a dialog with the cosmetic industry on how to eliminate the contaminant. The agency can also consider requiring a warning label against the use of talc in the perineal area by women as requested in the 1994 citizen petition.

Timeline:

Start date: February, 2000 Completion date: February 2001

February - March	Contract development
March - June	Purchase talc products; Sample collection by FDA field personnel
July - August	Sample analysis
September	X-ray confirmation (if necessary)
January	Final Report

Part IV (a) Budget

Personnel Requirements:

Robert J. Schreiman, Laboratory Director, Bain Environmental, Inc., Chicago, IL
Electron microscopist
% Effort: 95%
Duration of effort: 200 hours
Salary: none
Fringe Benefits: none

Resources

Laboratory: $22,500 ($450/sample x 50 samples)
Cosmetic products: $700
Misc: $1,800
Total budget: $25,000

Other support:

Donald C. Havery (OCAC/CFSAN): Contract development and monitoring; talc product acquisition
Stanley Cichowicz (OPDFB/CFSAN): Microscopic data analysis
Dr. Nancy Hepp (OCAC/DSAT): X-ray diffraction data analysis

Part IV

Biographical Information

Principle investigator: Donald C. Havery; Chief, Cosmetics Technology Branch

Educational Background:
1971: University of South Florida, Tampa, FL; BS
1975, 1977-78, 1991: George Washington University, Washington, DC; Graduate courses in Advanced Organic Chemistry I & II, Quantum Mechanics, and microbiology

Research and/or Professional Experience:
- Twenty years laboratory experience on the development of analytical methods for the determination of trace level food contaminants (eg. N-nitrosamines)
- Nine years experience directing the development of analytical methods for the determination of cosmetic contaminants and raw materials.
- Forty publications and book chapters on analytical methods for the determination of compounds of toxicological interest to the agency such as N-nitroso compounds, ethyl carbamate, and fragrance and cosmetic ingredients.

Co-Investigator: Stanley M. Cichowicz, Biologist, Microanalytical Branch, Office of Plant and Dairy Foods and Beverages

Educational Background:
1968, Ohio State University, BS.
1969-1972, Cleveland State University, Graduate School.

Research and/or Professional Experience:
- Sixteen years laboratory experience in the development of analytical methods for the determination of microscopic contaminants of foods using light microscopy.
- Two years laboratory work and supervisory experience in developing methods in forensic and materials microscopy, and as a forensic document examiner using polarized light microscopy methodology and digital imaging.
- Nine years laboratory experience in supervising a special problems light microscopy laboratory and developing analytical methods for the identification and characterization of ground botanical material using polarized light microscopy.

Dr. Nancy Hepp, chemist, Colors Technology Branch

Educational Background:
1983: George Washington University, B.S.
1989: Georgetown University, Ph..D.

Research and/or Professional Experience:

- Eleven years experience in the analysis of colors and heavy metals
- Graduate work in the use of x-ray diffraction

Laurie R. Bain, Bain Environmental, Inc., (See attached resume)

Robert J. Schreiman, Bain Environmental, Inc. (See attached resume)

Signature Page for Application

Project Title: The determination of the composition of cosmetic grade talc.

Principle Investigator (PI): Donald C. Havery

Co-investigator (co-PI): Stanley M. Cichowicz

DC Havery 11/3/00
Principle Investigator/Date

Sandra Bell 11/3/00
PI's Division Director/Date

Stanley M Cichowicz 11/3/00
Co-investigator/Date

Mary B. Trudeau for DLP 11/3/2000
Co-PI's Division Director/Date

Bain Environmental, Inc.

LAURIE R. BAIN
BAIN ENVIRONMENTAL, INC.
(b) (6) [redacted]

Management professional with 14 years of experience in environmental consulting, field and analytical services complementing previous regulatory compliance and safety experience.

EDUCATION

1987-1988 M.S., Occupational Safety Management, Indiana State University, Terre Haute, Indiana (GPA 3.8/4.0)
Graduate research: The comparison of the Fibrous Aerosol Monitor with NIOSH Method 7400 and also a comparison of the K^2 Asbestest with polarized light microscopy for the detection of asbestos.
Honors: Academic Scholarship and Student Assistantship

1981-1985 B.S., Southern Illinois University, Carbondale, Illinois (GPA 3.5/4.0)
Honors: Dean's list

EXPERIENCE

1996-Present **Bain Environmental, Inc.**
Chicago, Illinois

- Comprehensive range of services includes environmental site assessments (Phase I, II, and III); indoor air quality investigations; industrial hygiene surveys, sampling, and analyses; inspections, sampling, and analyses for lead, radon, and asbestos; and underground storage tank investigations.

1988-1996 **McCrone Environmental Services, Inc.**
Westmont, Illinois

- Responsible for compliance with federal, state and local environmental regulations regarding air, water, and solid waste.
- Developed all technical services related to industrial hygiene sampling, environmental site assessments and associated remedial activities, underground storage tanks, lead, radon, and health/safety audits.
- Conducted Phase I, II and III environmental site assessments.
- Conducted several of the largest indoor air quality investigations in the Chicagoland area.
- Responsible for the training and management of all technical personnel.
- Development, maintenance and compliance of the corporate Chemical Hygiene Plan, Hazard Communication Program and Radiation Safety Program.
- Chemical Hygiene Officer for The McCrone Group.
- Assistant Radiation Safety Officer for The McCrone Group.
- Quality Control Officer for the Good Laboratory Practices (GLP) Program.
- Responsible for maintaining and upgrading procedures and the continuous monitoring of the QA/QC Program.
- Management and oversight of AIHA, PAT and AAR Programs for laboratory and Personnel accreditations.

(b) (6) [redacted] Phone: (b) (6) [redacted] Fax: (b) (6) [redacted]

1987 **Illinois Department of Public Health**
Springfield, Illinois
- Conducting compliance inspections of asbestos abatement projects.
- Inspecting schools for asbestos-containing materials.
- Compiling data analyses and evaluating inspection reports via hazard analysis to determine required corrective action.
- Responding to variance requests in accordance with state regulations.
- Assisting in the revision of the Asbestos Abatement Rules and Regulations for Illinois Public and Private Schools.
- Testing of asbestos workers for licensure.

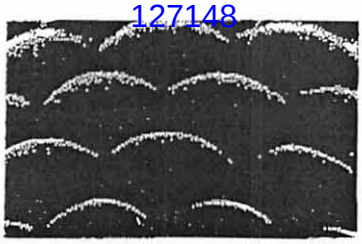
1985-1986 **Adams County Health Department**
Quincy, Illinois
- Performed inspections of food service establishments to determine compliance with State regulations.
- Inspected and evaluated private sewage disposal and water supply installations.
- Investigated complaints concerning the protection of public health.

PROFESSIONAL CERTIFICATIONS

- Northwestern University, "Radiation Safety," 1995.
- Midwest Center for Occupational Health & Safety, "Conducting Indoor Air Quality Investigations," 1992.
- University of Illinois, "40 Hour General Site Worker Program," 1992.
- University of Illinois, "40 Hour Hazardous Waste Site Supervisor," 1992.
- Georgia Institute of Technology, "Management of Underground Storage Tank Systems," 1992.
- The Environmental Institute, "Lead Abatement: Commercial and Industrial," 1991.
- Midwest Asbestos Information Center, "Building Inspection," 1987.
- Midwest Asbestos Information Center, "Management Planning," 1987.
- The Center for Professional Advancement, "Environmental Compliance Audits and Site Assessments," 1989.
- Air Sampling Professional - Illinois Department of Public Health, 1989.
- Asbestos Project Manager - Illinois Department of Public Health, 1989.
- Asbestos Inspector - Illinois Department of Public Health, 1989.
- Asbestos Management Planner - Illinois Department of Public Health, 1989.
- Midwest Asbestos Information Center, "Operations and Maintenance," 1987.
- National Institute for Occupational Safety and Health "Sampling and Evaluating Airborne Asbestos Dust (NIOSH 582)," 1987.
- Midwest Asbestos Information Center, "Practices and Procedures in Asbestos Control," 1987.

PROFESSIONAL AFFILIATIONS

American Society of Heating Refrigeration and Air-conditioning Engineers
American Chemical Society
American Industrial Hygiene Association
American Society of Safety Engineers
Environmental Information Association
National Environmental Health Association
Illinois Public Health Association
Illinois Environmental Health Association



Robert J. Schreiman

e-mail:(b) (6) Hmpg:http://members.dsl.telocity.com/~fishman

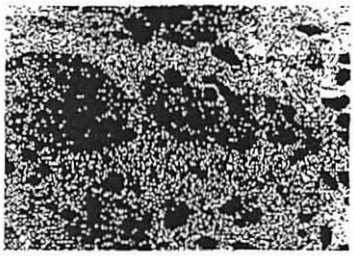
Professional Objective

- Apply Post Graduate database management, webpage design and computer language skills
- Gain further knowledge and understanding of practical uses for different computer languages

Summary of Qualifications

Post Graduate level development experience and basic practical working knowledge of Microsoft Visual Basic 5.0, Microsoft Access 97, Microsoft Excel 97, Borland C++, Adobe PageMill 3.0, HTML Assistant Pro Lite (Web Page Construction Kit), Corel Draw 4. Personal Hardware Installation/Hardware System information and experience: Installation of US-Robotics 56K modem, Telocity DSL Modem, I-omega 100 I-omega 100 megabite Zip Drive, Hewlett Packard Scan Jet 4c, Western Digital 2.1 Gig Hard drive, 2 x 16 Megs of Ram, Sony Spressa Cd burner. All items used for the Expedition of Web Page Design.

Past Work Experience



Director of Asbestos Department May, 1997 to Present

Stat Analysis Corporation, Chicago, Ill.

Duties includ all technical aspects of the laboratory which include selection, utilizing, trouble shooting and maintaining all equipment, maintaining and upgrading procedures for analysis, coordinating intra- and inter-laboratory projects with outside firms and marketing services. Responsibilities also include continuous monitoring of the quality Assurance/Quality Control program.

Director of Laboratory Services July, 1993 to August, 1996 Carnow, Conibear Associates, Ltd. Chicago, Ill.

Duties included all technical aspects of the laboratory which include selection, utilizing, trouble shooting and maintaining all equipment, maintaining and upgrading procedures for analysis, coordinating intra- and inter-laboratory projects with outside firms and marketing services. Responsibilities also include continuous monitoring of the quality Assurance/Quality Control program.

Microscopist May 1990 to July 1993 Carnow, Conibear Associates, Ltd. Chicago, Ill.

Responsible for microscopical identification of asbestos using both transmission electron microscopy and polarized light microscopy. Also used phase contrast microscopy to analyze air samples to determine the presence and concentration of air contaminants. These responsibilities all follow with quality assurance practices, maintenance of instrumentation and training of personnel. Other duties include secondary on site field consultant for environmental and industrial health and hygiene.

Analytical Chemist October, 1992 to July 1993 Athena Analytical Laboratory, Inc. Chicago, Ill.

Responsible for mass spectrophotometry interpretation; method development; trouble shooting of ICP, GC/MS, GC, and Spec 20 instrumentation; environmental data review; and CLP SW846, air, soil, and water analysis. Routine wet chemistry techniques included, semi-volatile extraction's, volatile organic extraction's, and metal digestion.

Analyst January, 1989 to May 1990 Aries Environmental Services, Ltd. Batavia, Ill

Responsible for transmission electron microscopy analysis including the coordination of sample preparation, microscopic analysis, quality assurance practices, maintenance of instrumentation and training of personnel. Other analytical techniques included phase contrast microscopy and polarized light microscopy. Also participated in air monitoring for determining the presence and concentration of air contaminants.

Education

Bachelor of Science, Biology, 1988 Northern Illinois University Dekalb, Illinois

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Continuing Education and Professional Training

EPA 8240 8270 Assist, 1992 Hewlett Packard Analytical Products Group, Chicago, Illinois

HP-MS Dos Operation, 1992 Hewlett Packard Analytical Products Group, Chicago, Illinois

Building Chromatography Skills, 1993 J&W Scientific, Lisle, Illinois

Atomic Emission Spectrophotometry, 1993 Perk Elmer, Oak Brook, Illinois

Hazardous Materials Safety Training Program, 1990-1992 Carnow, Conibear Associated, Ltd. Chicago, Illinois

Asbestos Identification, 1990 McCrone Research Institute, Chicago, Illinois

Niosh 582, 1990 Morgan Environmental Association, Chicago, Illinois

Transmission Electron Microscopy, 1989 JEOL, Peabody, Massachusetts

Practices and Procedures in Asbestos Control, 1989 University of Illinois, Chicago, Illinois

Biological Electron Microscopy, 1988 Northern Illinois University, DeKalb, Illinois

Professional Certification and Licensure

EPA 8240 EPA 8279 Assist, 1992

Atomic Emission Spectrophotometry, 1993

Gas Chromatography, 1993

Transmission Electron Microscopy, Illinois, 1988-1996

Air Sampling Professional, 1991, 1992

Project Management, 1991-1995

Management Planner, 1991, 1992

Research Experience

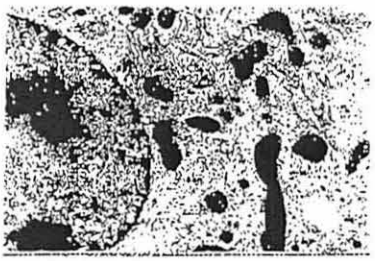
Drake University, Desmoines, Iowa, 1990-1991 Ichthyological Survey of the Fish Populations in Kalimantan (Borneo), Indonesia

Northern Illinois University, Dekalb, Illinois, Fall 1987-1988 Identification and Cultivation of Invertebrate Zooplankton

Northern Illinois University, Dekalb, Illinois, 1987-1988 Transmission Electron Microscopical examination of the inter-cellular, ultrastructural changes during the Autumnal Senescence of Maple Leaves.

Northern Illinois University, Dekalb, Illinois, Intercession Spring and Summer 1987 Examination of Plant Ecosystem Diversity of the Chichiuan Desert.

Professional Organization Memberships and Affiliations



State Microscopical Society of Illinois, 1990-1992, 1996

American Chemical Society, 1993

Midwest Society of Electron Microscopists, 1988-1992

References

1. Chang, S., Risch, H.A., Perineal talc exposure and risk of ovarian carcinoma, Cancer (1997) 79(12), 2396-2401

2. Cook, L.S., Kamb, M.L., Weiss, N.S., Perineal powder exposure and the risk of ovarian cancer, Am. J. Epidemiology (1997) 145(5), 459-465

3. Cramer DW., Perineal talc exposure and subsequent epithelial ovarian cancer: A case-control study, Obstet. Gynecol. 94(1):160, 1999 Jul.

4. Cramer, D.W., Welch, W.R., Scully, R.E., Ovarian cancer and talc, Cancer (1982) 50, 372-376

5. Cramer DW. Liberman RF. Titus-Ernstoff L. Welch WR. Greenberg ER. Baron JA. Harlow BL., Genital talc exposure and risk of ovarian cancer, Int. J. Cancer. 81(3):351-356, 1999 May 5

6. Gertig, DM; Hunter, DJ; Cramer, DW, et al., Prospective study of talc use and ovarian cancer, J Nat Cancer Inst, 92: (3) 249-252 FEB 2 2000

7. Harlow, B.L., Hartge, P.A., A review of perineal talc exposure and risk of ovarian cancer, Regulat. Toxicol. Pharmacol. (1995) 21, 254-260

8. Harlow, B.L., Cramer, D.W., Bell, D.A., Welch, W.R., Perineal exposure to talc and ovarian cancer risk, Obstetrics & Gynecology (1992) 80(1), 19-26

9. Hartge, P., Hoover, R., Lesher, L.P., McGowan, L., Talc and ovarian cancer, J. Am. Med. Assoc. (1983) 250(14), 1844

10. Heller, D.S., Gordon, R.E., Katz, N., Correlation of asbestos fiber burdens in fallopian tubes and ovarian tissue, Am. J. Obstet. Gynecol. (2000) 181(2), 346-347

11. Heller, D.S., Westhoff, C., Gordon, R.E., Katz, N., The relationship between perineal cosmetic talc usage and ovarian talc particle burden, Am. J. Obstetrics Gynecol. (1996) 174(5), 1507-1510

12. Kasper, C.S., Chandler Jr., P.J., Possible morbidity in women from talc on condoms, J. Am. Med. Assoc. (1995) 273(11), 846-847

13. Muscat, J.E., Wynder, E.L., Perineal powder exposure and the risk of ovarian cancer, Am. J. Epidemiol. (1997) 146(9), 786

14. Risch, H.A., Marrtee, L.D., Jain, M., Howe, G.R., Differences in risk factors for epithelial ovarian cancer by histologic type: results of a case-control study, Am. J. Epidemiol.

(1996) 144, 363-372

15. Rosenblatt, K.A., Szklo, M., Rosenshein, N.B., Mineral fiber exposure and the development of ovarian cancer, Gynecol. Oncol. (1992) 45, 20-25

16. Tortolero, G., Mitchell, M.F., The epidemiology of ovarian cancer, J. Cell. Biochem. (1995) Suppl 23, 200-207

17. Wehner, A.P., Is cosmetic talc safe? , Comments Toxicol. (1998) 6(5), 357-366

18. Whysner, J., Mohan, M., Perineal application of talc and cornstarch powders: Evaluation of ovarian cancer risk, Am. J. Obstet. Gynecol. (2000) 182(3), 720-724

19. Wong C. Hempling RE. Piver MS. Natarajan N. Mettlin CJ., Perineal talc exposure and subsequent epithelial ovarian cancer: A case-control study, Obstet. Gynecol. 93(3):372-376, 1999 Mar.

December 20, 1996

Chief, Cosmetics Technology Branch (HFS-127)

Response to reviewer's comments; Office of Women's Health talc proposal

Nutrition Strategic Manager (HFS-019)

The following is in response to comments made by reviewers of the proposal submitted to the Office of Women's Health entitled Survey of Cosmetic Talc for Asbestos, Composition, and Particle Size:

1. **Interpretation of results**: The PI has no experience with microscopy or asbestos analysis in talc except that acquired from reading the relevant literature in preparation of the proposal. The panel needs to be aware that the opinions expressed in the literature on the best techniques for the proposed study are not unanimous; this is a very controversial subject. The PI will rely primarily on the views expressed in the current literature and on the expertise and experience of the contractor. The contractor will collect and interpret the data, and statistically evaluate the results. The data obtained by the contractor will also be reviewed internally by Dr. Nancy Hepp (Office of Cosmetics and Colors) who has knowledge of x-ray techniques used for elemental composition, and by Dr. Ben Tall (Office of Special Research Skills) who has experience with electron microscopy.

2. **Cost of the proposed work**: The cost of the work was estimated following discussions with a potential contractor on the types of analytical methods which would be required to obtain the desired information, and the cost of these analyses per sample. Cost factors are based on the usual per-sample fees charged by the contractor for the desired analytical tests, and an estimate of the cost of commercial talc products. It was assumed that the cost estimate provided by the potential contractor was total cost, including any overhead costs. It should be noted that the analysis of talc for asbestos involves a series of instrumental techniques, and that a negitive finding by an initial test means that further analysis by other instrumental methods is unnecessary. Therefore it was assumed that most talc products would require the more costly electron microscopic analysis. If this is not the case, then additional talc products will be purchased and analyzed until the money appropriated for the study are exhausted.

3. **Ethnicity as a factor in ovarian cancer**: The statement made in the proposal relating to environmental factors as causative factors of ovarian cancer was the conclusion of the author in the cited reference (copy attached). The relationship between ethnicity and ovarian cancer was not discussed by the author of this paper. I have no additional information relating to the role of ethnic background, talc use, and ovarian cancer, and therefore cannot make any additional comments.

4. **Benchmark time frames**: Additional time frames have been added in the "Projected Outcomes" section. More specific time frames were omitted in the original proposal because a potential contractor consulted on time needed for analysis indicated that much of the analyses were automated, and analysis of 50 samples would not require a significant amount of time once the products were received.

5. **PI experience in contract monitoring**: The PI has no experience writing or monitoring a contract; however, the PI has completed contract monitoring training and has participated in the contract monitoring process as part of a Program Advisory Group (PAG).

Donald C. Havery

cc:
HFS-100 (Bailey)
HFS-125 (Dennis)
HFS-127 (Havery) ✓

DEPARTMENT OF HEALTH & HUMAN SERVICES

Food and Drug Administration
Rockville MD 20857

Donald Havery
Center for Food Safety & Applied Nutrition
Office of Cosmetics and Colors
Chief, Cosmetics Technology Branch, HFS-127
200 C Street SW, Room 3864
Washington, DC 20204

MAR 13 2001

Dear Mr. Havery:

Thank you for participating in the Office of Women's Health (OWH) FY 2000 Science Program. OWH received many excellent proposals this year and based on the project's scientific merit and consistency with the mission of this Office only a limited number of those proposals submitted were funded.

As we discussed, we intended to fund your proposal under our special funding initiatives program. However, we understand that new information has become available that is relevant to your proposal and this needs to be considered prior to the initiation of the project as described. Therefore, we are not funding your proposal in FY 2001. We will re-examined the overall project objectives in FY 2002 should you determined that this issue still needs to be examined. We recommend (b) (5) [redacted]

A copy of the comments made by the external reviewers is being forwarded to you. If you have other comments or questions please do not hesitate to contact Kennerly K. Chapman, OWH, at 301-827-0293.

We appreciate the time and effort taken to submit your proposal to OWH and to your interest in women's health issues. We look forward to working with you on other women's health projects in the future.

Sincerely,

Margaret Ann Miller

Margaret Ann Miller, Ph.D., DABT
Science Program Manager
Office of Women's Health

cc: Center Liaison/Blakely, S (HFS-019)

DEPARTMENT OF HEALTH & HUMAN SERVICES
Public Health Service

Food and Drug Administration
Washington DC 20204

October 18, 2000

Dr. Laurie Bain
Bain Environmental
5315 N. Clark St.
Chicago, IL 60640

Dr. Bain,

Thank you for your interest in our project on cosmetic talc composition. The purpose of the project is to determine the composition of current market cosmetic talc, determine if asbestifom materials are present, and to measure particle size distribution of the products. If our project is funded, we intend to collect up to 50 samples of commercial talc powders for analysis. A decision on what projects will be funded will be made in January, 2001.

In order for me to apply for project funding, I need the information below from you to include in my proposal. Thank you for taking the time to respond. If you have any questions or need clarifications you can reach me at (202) 205-4345, or at Dhavery@CFSAN.FDA.gov.

DCHavery

Donald C. Havery
Food and Drug Administration
Office of Cosmetics and Colors
200 C. St., SW
Washington, DC 20204

February 4, 1994

Chief, Cosmetics Technology Branch (HFS-127)

Summary of Talc Symposium: Consumer Uses and Health Perspectives

Adele Dennis
Director, Division of Science and Applied Technology
(HFS-125)

Talc Inhalation Studies

Talc: hydrous magnesium silicate; 900,000 tons/year used in the US; 48,000 tons/yr (6%) in cosmetics. Treatment of raw talc for cosmetic use results in 90-95% pure talc. Uses: powders, antiperspirants, pill coatings/fillers, foods (chewing gum/anticaking), medical devices (surgical glove/condom coating; Note: no longer used in surgical gloves). Cosmetic uses: antiperspirants, semi-solid matrices (eye shadow), powders. Talc used in powders is 200 mesh and is the only cosmetically used talc which has the potential for being inhaled. This particle size is too large to be respirable however. Most talc particles in powders will be trapped in the nose. Talc and asbestos materials are not formed under the same geologic conditions, therefore careful selection of mining sites results is asbestos-free talc. Estimated human exposure via respiration when using powder during baby diapering: 0.2 - 2 mg/m^3.

NTP study: Requested by NIOSH due to worker exposure. Talc particles smaller than typically used in cosmetic products were used in the NTP study to determine the effects on inhalation. Larger particles would not have made it into the lungs. Two year study; exposure levels tested in chronic study: 6, 18 mg/m^3. Rodent exposure 2,000 - 20,000 times greater than estimated human exposure. Tumors formed only in female rats at the highest dose. The species of female rats used are known to be particularly sensitive to particulates. No tumors were observed in male or female mice. Adrenal medulla neoplasms were also observed in rats; origin is unknown. Talc exposure tested at the highest level was an "overload"; clearance time from the lung at this concentration is greatly increased. The smaller the particles the longer the clearance time. In a related study, there was no evidence for increased incidence of lung tumors in coal mine workers exposed to coal dust whose estimated exposure was greater than the exposure to particles in the talc rat study. TiO_2, chromium dioxide, volcanic ash and quartz dust have all produced tumors in female rats (not male rats), by inhalation. A negative dust control was not included in the NTP study which raises the question: did the observed tumors result from talc or would they have arisen from any particulate? There was one member of the NTP review panel who did not agree with the conclusions prepared by the study team. This person's comments included: (1) the maximum tolerated dose was exceeded at 18 mg/m^3, and was therefore inappropriate; (2)

there was an increase in tumors in the controls over that observed historically for this animal which was neglected in the study conclusions. Historically, talc has been used as the negative control for inhalation studies on silica and asbestos.

Caution was urged when extrapolating the rodent study results to man. Lung branching between rodents and man is different and this will effect which cells are exposed to particulates.

Ovarian Cancer and Talc Use

US annual incidence of ovarian cancer: 15 per 100,000; 8 per 100,000 deaths per year. Trends in mortality and incidence of ovarian cancer have been stable for 20 years. Factors which decrease incidence: use of oral contraceptives, breast feeding, child bearing, hysterectomy. (ie. Activities which reduce the number of times the ovary has to repair itself following release of an egg).

Talc can migrate to the ovaries, though the route is presently unknown. There is some evidence that particulates can migrate to other body tissues via the vascular system. Intestinal absorption is negligible. Radiolabeled talc injected vaginally into rabbits did not migrate to the ovaries.

Questions about talc migration to ovaries originated with a study published by Henderson in 1971 in which talc was found in human ovaries. The study was repeated in 1979 and talc was again found, this time in the ovaries of nontumoragenic women. These studies may have been flawed. Controls may not have been adequately conducted. In another experiment, labeled talc was deposited in the vagina but no translocation to the ovaries was detected. Analytical techniques used by Henderson to determine talc were questioned. Since many minerals are structurally similar, misidentification was likely. Only in the last ten years have methods become available for reliable talc measurement. Mineralogical methods were used to measure talc particulates and not histological techniques. Ovary tissues may have been removed by physicians using gloves contaminated with talc (though in the second study, ovarian tissue was removed with forceps only). Talc granulomas following surgery due to talc on gloves has been reported, but no granulomas were reported in Henderson's studies, raising questions about what particulates Henderson actually observed.

There have been 9 epidemiological studies of the relationship between talc use and ovarian cancer. Two studies showed a statistically significant increase in cancer incidence, the other studies showed a negative correlation. The risk of ovarian cancer prior to 1960 was greater than after 1960. This could be due to the reduction of asbestos fibers in talc due to modern processing techniques. Epidemiological studies suggest a small risk of ovarian cancer for talc

Talc: *(Purpose: As a follow-up to the 1994 talc symposium, to identify the chemical composition of talc, and to evaluate the identity of the material used in the NTP study on the carcinogenicity of talc particles in mice)* F. Hurley continued writing up a review of CTFA's comments to the citizen's petition relating to talc. A copy of the petition itself was obtained for review.

N-Nitrosamines: D. Havery, R. Yates, and H. Chou continued worked on a malfunctioning Thermal Energy Analyzer instrument used for N-nitrosamine analysis. It was determined that the photomultiplier tube had cracked and was bad. Fortunately we have a spare, since a new tube costs $2,000.

Other: R. Yates drafted an annual report on the activities of this project in FY95.

D. Havery drafted a letter to a scientist in The Netherlands in response to a request for a sample of 2-ethylhexyl 4-(N-nitroso-N-methylamino) benzoate. The letter was finalized. and the sample was mailed.

G. Black continued working on the inventory of CTEB's chemicals and cosmetic raw materials.

Manuscript Status: (Status changes indicated in bold type)

Accepted by the Journal:

"Determination of 2-Ethylhexyl 4-(N-methyl-N-nitrosamino) Benzoate in Commercial Sunscreens and Cosmetic Products" (Galley reviewed; publication scheduled for the November/December issue)

Under review by Technical Editing:

"Nitro musks in fragrance products - An update of FDA findings"

Under Review at the Branch level:

"A Rapid Method for the Determination of Nitrosating Agents in Cosmetic Products by Chemiluminescence Detection of Nitric Oxide"

"Determination of Formaldehyde Donating and Paraben Preservatives in Cosmetic Products by Solid Phase Extraction"

"Surveys of Commercial Fragrance Products from 1985-1992 for Nitro Musks"

"Determination of musk ambrette, musk xylol, and musk ketone in fragrance products by capillary gas chromatography with electron capture detection"

users: 1.3 relative risk where 1.0 is equivalent to no risk. There are a number of confounders which will influence epidemiological studies including race, marital status, age, education, history of tubal ligation, use of oral contraceptives, and asbestos exposure. Inherent bias of epidemiological studies were also mentioned including inaccurate interview information (eg. recollection).

A six fold increase in ovarian cancer has been identified between women in the U.S. and Japan. This may be attributed to dietary fat intake.

General Conclusion: Additional information is needed to make a definitive conclusion about talc use and ovarian cancer. Presently the increased risk of ovarian cancer due to talc exposure is a hypothesis which remains to be tested.

Donald C. Havery

"Determination of 1,4-dioxane in ethoxylated cosmetic raw materials and in cosmetic finished products"

"Determination of contaminants in fatty acid diethanolamides"

10/25/05

Bailey, Catherine J

OWH -05- statement 102505.

From: Bailey, Catherine J
Sent: Tuesday, October 25, 2005 1:40 PM
To: Obias-Manno, Dulce *
Cc: Miller, Margaret; Bronaugh, Robert L; Yourick, Jeffrey J; Katz, Linda
Subject: RE: ** Manuscript OWH** pls review for accuracy

Thanks for the opportunity to comment. See the attached version w/ tracked changes. Drs. Bronaugh and Yourick reviewed it. (b) (5) [redacted] We also suggest some additional changes. Let me know if you have any questions or want to discuss.

see attached

-----Original Message-----
From: Obias-Manno, Dulce *
Sent: Monday, October 24, 2005 10:30 AM
To: Bailey, Catherine J
Cc: 'Miller, Margaret'
Subject: ** Manuscript OWH** pls review for accuracy

(b) (5) [redacted]

Women rely on cosmetic products to maintain a healthy and youthful appearance and certain formulations (retinol, estrogenic hormone constituents or placental extract) may be absorbed and metabolized. In a pilot study funded by OWH on absorption and metabolism of retinol in cosmetic formulations, examined both fuzzy rat and human skin.[50] The results showed that retinol was not absorped through human skin. In a related study, several in vivo bioassays were employed to determine the estrogenic activity in different cosmetic formulations. No estrogenic activity was found in those products formulated with wild yam, and placental extract but some activity was noted in formulation containing black cohosh, glycrrhia urlensis/isoflavone complex, dong quai and wild yam. (b) (5) [redacted]

(b) (5) [redacted]

References:

50. Jung, C.T., Bronaugh, R.L. and Yourick J. J.: Percutaneous absorption and metabolism of retinol in fuzzy rat and human skin. AAPS PharmSci, 4(4):Abstract # R6078, 2002.

Dulce Obias-Manno, BSN,MHSA,RN
ORISE Fellow
FDA/OC/Office of Women's Health
5600 Fisher's Lane Rm 16-65
Rockville, MD 20857
Tel: 301-827-9101

Bailey, Catherine J

From: Obias-Manno, Dulce *
Sent: Monday, October 24, 2005 10:30 AM
To: Bailey, Catherine J
Cc: 'Miller, Margaret'
Subject: pls review for accuracy

(b) (5) [redacted]

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(b) (5) [redacted]

References:

50. Jung, C.T., Bronaugh, R.L. and Yourick J. J.: Percutaneous absorption and metabolism of retinol in fuzzy rat and human skin. AAPS PharmSci, 4(4):Abstract # R6078, 2002.

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(b) (5)

[redacted]

(b) (5)

References:

50. Jung, C.T., Bronaugh, R.L. and Yourick J. J.: Percutaneous absorption and metabolism of retinol in fuzzy rat and human skin. AAPS PharmSci, 4(4):Abstract # R6078, 2002.

Dr. Bronaugh, I do not have a reference for 51. Please update if one has been accepted for publication. Otherwise, I will reference as personal communication from you.

(b) (5)

[redacted]

Food and Drug Administration
Center for Food Safety and Applied Nutrition

PROPOSAL SIGNATURE PAGE

Project Title: Survey of Cosmetic Talc for Asbestos, Composition, and Particle Size

Donald C. Hawey Principal Investigator	11/19/96 Date

CFSAN APPROVAL:

Donna A Dennis Director, Division of Science and Applied Technology	11/19/96 Date
[signature] Director, Office of Cosmetics and Colors	11/19/96 Date
Research Strategic Manager	Date
Women's Health Liaison or Appropriate Strategic Manager	Date
Research Involving Human Subjects Committee (RIHSC) Representative and/or Institutional Animal Care and Use Committee (IACUC) Chairperson ☐ N/A or *check two* ⇒ ☐RIHSC ☐IACUC *** ☐Submitted ☐Approved ☐Disapproved	Date
Director, Division of Planning and Financial Management	Date
Deputy Director for Programs	Date
Director, Center for Food Safety and Applied Nutrition	Date

November 19, 1996

OFFICE OF WOMEN'S HEALTH FDA INTRAMURAL PROGRAM

(b) (5) [redacted]

Principle Applicant:
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DESCRIPTION

Abstract

Epidemiological studies have linked talc use in the perineal area with ovarian cancer, one of the leading causes of death in American women. Talc and asbestos, a known carcinogen, can be found together if the talc mining site is not carefully selected or if the talc ore is not sufficiently purified. The only survey of US talc for composition and fibrous material such as asbestos using modern, reliable electron microscopic techniques was conducted twenty years ago, and asbestos was found. The composition of current market cosmetic talc, asbestos concentration, and particle size distribution are needed to assist in the evaluation of a citizen petition, and to provide data to clarify the role of asbestos as a factor in the cause of ovarian cancer.

Background

Ovarian cancer is a pernicious disease and one of the leading causes of mortality among U.S. women. An annual incidence of 22,000 new cases of cancer of the ovary have been reported, resulting in 13,300 deaths per year and an average lifetime risk of 1 in 70[1]. The highest incidence of ovarian malignancy occurs in industrialized countries of Northern Europe and North America, which points strongly to environmental factors as causative agents in the initiation of the disease[2].

Epidemiological studies have been conducted in an attempt to identify risk factors associated with ovarian cancer. Several studies have found a higher risk of ovarian cancer in women using talc in the perineal area especially in women with a long history of talc use[3-9]. The actual causes of ovarian cancer are unknown. The possibility that asbestos may be a factor has been suggested. The factors linking talc use, asbestos, and ovarian cancer can be summarized as follows: (1) talc and asbestos are chemically similar and can occur naturally together depending on mining site and ore quality; (2) asbestos has been shown to induce ovarian epithelial hyperplasia in guinea pigs and rabbits similar to early epithelial tumors in women[10]; (3) asbestos has been identified in talc[11]; (4) female asbestos workers have been found to have an unusually high number of peritoneal neoplasms[12]; (5) the ability of talc to migrate from the vagina to the fallopian tubes[13] and the ovaries[14-15] has been demonstrated; and (6) talc particles have been identified in both normal and neoplastic ovarian tissue[16-19].

Talc has also been implicated as a potential contributing factor in the deleterious health effects some women have reported in association with silicone breast implants. The leading cause of morbidity in women relating to silicone breast implants is capsular fibrosis[20]. In a study of tissue adjacent to silicone breast protheses a high incidence (71%) of the samples were found to contain talc particles[20]. Since talc is known to cause capsular fibrosis while silicone does not, the investigators in this study concluded that " talc may contribute to periprosthetic fibrosclerosis." Talc may be used in the manufacture of the silicone gel breast implants, perhaps as a mold release agent[20].

In a two year National Toxicology Program (NTP) study on the effects of inhaled cosmetic grade talc on rats and mice, "clear evidence of carcinogenic activity of talc in female rats" was observed.[21] The study was criticized, however, because of the small talc particle size and high concentrations used.[22] Though it has been claimed that cosmetic talc powders contain almost exclusively 200-mesh (74 μm) talc[22], there is no published data on particle size distribution of cosmetic talc.

Talc is a hydrous magnesium silicate which is widely used in a variety of cosmetic and pharmaceutical products. As a naturally occurring material, every talc deposit has a different chemical composition and morphology depending on mine location and the selection/purification processes used to isolate it[23]. The variable composition results in different grades of talc depending on the intended use of the material. According to the Cosmetic, Toiletry, and Fragrance Association, cosmetic grade talc should have a minimum of 90% hydrated magnesium silicate, with the remainder consisting of naturally associated minerals such as calcite, chlorite, dolomite, kaolin, and magnesite, and containing no detectable fibrous asbestos minerals. Asbestos is a term used to describe a group of calcium/magnesium silicates that occur in fibrous form and which have been shown to cause cancer in humans[24]. Depending on the mining site, asbestos minerals can be associated with talc deposits[25-27]. In the most recently published surveys of industrial, cosmetic and pharmaceutical talc using modern electron microscopic techniques, the presence of asbestos minerals in talc powders has been reported[26-28].

In 1983, the FDA received a citizen petition which requested that a warning statement be required on cosmetic talc products. This petition was denied in 1986 based in part on the belief that the actual levels of asbestiform minerals present in cosmetic talc had declined since the early 1970s when the problem of asbestos in talc received the attention of the agency. Another citizen petition was submitted in November, 1994, by the Cancer Prevention Coalition. The petition requests that the agency require that cosmetic talcum powder products bear a warning label such as "Talcum powder causes cancer in laboratory animals. Frequent talc application in the female genital area increases the risk of ovarian cancer."

While the etiology of ovarian cancer is a complex issue, one area which can be conclusively addressed is a determination of whether asbestos minerals are associated with cosmetic talc products. The only published survey of cosmetic talc conducted in the U.S. using modern electron microscopic techniques was conducted twenty years ago, and the presence of asbestos was reported[26]. Data on the chemical composition, asbestos content, and particle size distribution of current market commercial talc products will be used in the evaluation of the citizen petition, and depending on the results of the survey, may be used to justify a reevaluation of the current quality assurance and GMPs of the talc industry.

References

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Purpose/Objectives

The purpose of the proposed study is to determine the chemical composition, the presence of fibrous materials such as asbestos, and particle size distribution of current market talc products.

Relevance to OWH and FDA missions

Health promotion and disease prevention for women is the second highest priority of FDA's Women's Health Program Initiative. Cancer is the second leading cause of death in American women with 13,300 deaths per year resulting from ovarian cancer. Epidemiological studies have shown as increased risk of ovarian cancer with talc use. The FDA is responsible for enforcing regulatory requirements for cosmetics, including that cosmetic products contain no ingredients which may render them harmful to consumers under conditions of use, and that selected ingredients are present at nontoxic levels.

Proposed Project

A survey of 50 currently marketed talc products, including baby, adult, and medicated powders (domestic and imported) will be analyzed by contract for composition, fibrous materials such as asbestos, and particle size distribution.

Methods

Approximately 50 talc products will be collected for analysis, including baby, adult, and medicated talcs. Products will be purchased in the Washington, DC metropolitan area, and will also be collected by FDA field personnel from several different areas of the U.S. By obtaining talc products from a variety of different sources, the chances of obtaining products containing talc mined from the greatest number of geographic areas will be maximized. Products will be

analyzed for mineral composition and asbestos using the methods published by Parmentier and Gill[1]. Products will be analyzed by X-ray diffraction for mineral composition followed by scanning electron microscopy for fibers. If fibrous materials are observed, the presence of asbestos will be confirmed by transmission electron microscopy. Products will also be analyzed for particle size distribution. There are several acceptable instrumentation techniques available for particle size analysis, all of which provide acceptable analytical data. The techniques employed will be determined based on the instrumentation available to the contractor.

Projected Outcomes

Data collected on current market cosmetic talc products will be used to evaluate the citizen petition currently on file with the agency. Depending on the outcome of the survey, the data may also be used to justify more stringent measures to assure talc quality.

Time Line	
March 26, 1997	Announcement of awards
May 1, 1997	Solicitation of contract
September 1, 1997	Award contract
September 1997	Purchase talc products
November 1, 1997	Progress Report
May 1, 1998	Complete final report

Budget

Fifty domestic and imported talcum powders	$700
Contract for the analysis of talc products	$45,000
Total	$45,700

[1]Parmentier, C.J. and Gill, G.J., Practical aspects of talc analysis, *National Bureau of Standards Special Publication 506* (1978).

CURRICULUM VITAE

Donald C. Havery

1. Educational Background:

1967 - 1968	Concordia Collegiate Institute, Bronxville, NY; no degree
1968 - 1969	University of Florida, Gainesville, Fl; no degree
1969 - 1969	St. Petersburg Jr. College, St. Petersburg, FL; AA degree, 1969
1970 - 1971	University of South Florida, Tampa, FL; BS degree, 1971
1975, 1977-78, 1991	George Washington University, Washington, DC; Graduate courses in Advanced Organic Chemistry I & II, Quantum Mechanics, and microbiology

2. Professional Experience:

1971 - 1972	Cooperative education student the Division of Chemistry and Physics, Food and Drug Administration, Washington, DC)
1972 - 1974	GS-5 chemist; Division of Chemistry and Physics, FDA, Washington, DC
1974 - 1975	GS-7 chemist; Division of Chemistry and Physics, FDA, Washington, DC
1975 - 1977	GS-9 chemist; Division of Chemistry and Physics, FDA, Washington, DC
1977 - 1978	GS-11 chemist; Division of Chemistry and Physics, FDA, Washington, DC
1978 - 1981	GS-12 chemist; Division of Chemistry and Physics, FDA, Washington, DC
1981 - 1990	GS-13 chemist; Division of Food Chemistry and Technology, FDA, Washington, DC)
1990 - present	GS-14 supervisory chemist; Office of Cosmetics and Colors, FDA, Washington, DC)

3. Honors and Awards

1974:	FDA quality increase
1982:	FDA commendable service award
1984:	FDA quality increase
1985:	FDA quality increase
1988:	FDA quality increase
1989:	FDA performance award
1989:	FDA quality increase
1990:	FDA performance step increase
1990:	FDA merit increase
1991:	FDA merit increase
1991:	FDA performance award
1992:	FDA Group Recognition award
1992:	FDA performance award
1993:	FDA performance award

4. Presentations:

1. "Survey of food products for volatile N-nitrosamines" (To the Association of Official Analytical Chemists, Washington, DC, October 13, 1975)
2. "Survey of finfish and shellfish for volatile N-nitrosamines" (To the Association of Analytical Chemists, Washington, DC, October 18, 1976)

3. "Trends in levels of N-nitrosopyrrolidine in fried bacon" (At the 5th meeting on the Analysis and formation of N-Nitroso Compounds, International Agency For Research on Cancer, Durham, NH, August 22, 1977)
4. "Survey of cured meat products for volatile N-nitrosamines: Comparison of two analytical methods" (At the 5th meeting on the Analysis and Formation of N-Nitroso Compounds, International Agency For Research on Cancer, Durham, NH, August 22, 1977)
5. "Human exposure to nitrosamines from foods" (At the annual meeting of the Institute of Food Chemists, Anaheim, CA, June 10, 1984)
6. "Survey of baby bottle rubber nipples for volatile N-nitrosamines" (To the Association of Analytical Chemists, Washington, DC, October 25, 1982)
7. "Nonvolatile N-nitrosamine investigations: Method for the determination of N-nitrosoamino acids and preliminary results of the development of a method for the determination of N-nitrosodipeptides N-terminal in proline" (At the 8th meeting on N-Nitroso Compounds; Occurrence and Biological Effects International Agency For Research on Cancer, Banff, Canada, September 4, 1983)
8. "A post/column reaction system for the detection of N-nitroso compounds by HPLC with a thermal energy analyzer" (At a conference entitled: The Advances in the Biology and Chemistry of N-nitroso and Related Compounds, Eppley Institute, Omaha, NB, May 19, 1988)
9. "A post/column reaction system for the detection of N-nitroso compounds by HPLC with a thermal energy analyzer" (At a National Institutes of Health seminar, Gaithesburg, MD, December 2, 1988)
10. "The use of chemiluminescence" (At a seminar entitled "Advanced Chromatographic Techniques", Food and Drug Administration, Detroit, MI, July 10, 1990)
11. "Nitrosamines in sunscreens and cosmetic products: occurrence, formation and trends" (ACS National Meeting, Washington, DC, August 23-28, 1992)
12. "N-Nitroso compounds: occurrence, and determination" (Society of Cosmetic Chemists Meeting, New York, New York, December 3-4, 1992)
13. "Overview of the occurrence and determination of N-nitroso compounds in food and cosmetics" (Cosmetic, Toiletry and Fragrance Association, Meeting of the Scientific Advisory Committee, Alexandria, Virginia, January 15, 1993)
14. "Nitrosamines in Cosmetics" (FDA Office of Cosmetics and Colors seminar; June 30 and October 4, 1994).
15. "Analysis of cosmetic raw materials and products" (American Chemical Society Middle Atlantic Meeting; Washington, DC; May 25, 1995)

5. Publications:
Forty publications and book chapters on analytical methods for the determination of compounds of toxicological interest to the agency such as N-nitroso compounds, ethyl carbamate and fragrance ingredients.

6. Offices Held in Professional Societies:
1995 to present Member of the Committee on Scientific Affairs; Society of Cosmetic Chemists

February 4, 1994

Chief, Cosmetics Technology Branch (HFS-127)

Summary of Talc Symposium: Consumer Uses and Health Perspectives

Adele Dennis
Director, Division of Science and Applied Technology
(HFS-125)

Talc Inhalation Studies

Talc: hydrous magnesium silicate; 900,000 tons/year used in the US; 48,000 tons/yr (6%) in cosmetics. Treatment of raw talc for cosmetic use results in 90-95% pure talc. Uses: powders, antiperspirants, pill coatings/fillers, foods (chewing gum/anticaking), medical devices (surgical glove/condom coating; Note: no longer used in surgical gloves). Cosmetic uses: antiperspirants, semi-solid matrices (eye shadow), powders. Talc used in powders is 200 mesh and is the only cosmetically used talc which has the potential for being inhaled. This particle size is too large to be respirable however. Most talc particles in powders will be trapped in the nose. Talc and asbestos materials are not formed under the same geologic conditions, therefore careful selection of mining sites results is asbestos-free talc. Estimated human exposure via respiration when using powder during baby diapering: 0.2 - 2 mg/m^3.

NTP study: Requested by NIOSH due to worker exposure. Talc particles smaller than typically used in cosmetic products were used in the NTP study to determine the effects on inhalation. Larger particles would not have made it into the lungs. Two year study; exposure levels tested in chronic study: 6, 18 mg/m^3. Rodent exposure 2,000 - 20,000 times greater than estimated human exposure. Tumors formed only in female rats at the highest dose. The species of female rats used are known to be particularly sensitive to particulates. No tumors were observed in male or female mice. Adrenal medulla neoplasms were also observed in rats; origin is unknown. Talc exposure tested at the highest level was an "overload"; clearance time from the lung at this concentration is greatly increased. The smaller the particles the longer the clearance time. In a related study, there was no evidence for increased incidence of lung tumors in coal mine workers exposed to coal dust whose estimated exposure was greater than the exposure to particles in the talc rat study. TiO_2, chromium dioxide, volcanic ash and quartz dust have all produced tumors in female rats (not male rats), by inhalation. A negative dust control was not included in the NTP study which raises the question: did the observed tumors result from talc or would they have arisen from any particulate? There was one member of the NTP review panel who did not agree with the conclusions prepared by the study team. This person's comments included: (1) the maximum tolerated dose was exceeded at 18 mg/m^3, and was therefore inappropriate; (2)

there was an increase in tumors in the controls over that observed historically for this animal which was neglected in the study conclusions. Historically, talc has been used as the negative control for inhalation studies on silica and asbestos.

Caution was urged when extrapolating the rodent study results to man. Lung branching between rodents and man is different and this will effect which cells are exposed to particulates.

Ovarian Cancer and Talc Use

US annual incidence of ovarian cancer: 15 per 100,000; 8 per 100,000 deaths per year. Trends in mortality and incidence of ovarian cancer have been stable for 20 years. Factors which decrease incidence: use of oral contraceptives, breast feeding, child bearing, hysterectomy. (ie. Activities which reduce the number of times the ovary has to repair itself following release of an egg).

Talc can migrate to the ovaries, though the route is presently unknown. There is some evidence that particulates can migrate to other body tissues via the vascular system. Intestinal absorption is negligible. Radiolabeled talc injected vaginally into rabbits did not migrate to the ovaries.

Questions about talc migration to ovaries originated with a study published by Henderson in 1971 in which talc was found in human ovaries. The study was repeated in 1979 and talc was again found, this time in the ovaries of nontumoragenic women. These studies may have been flawed. Controls may not have been adequately conducted. In another experiment, labeled talc was deposited in the vagina but no translocation to the ovaries was detected. Analytical techniques used by Henderson to determine talc were questioned. Since many minerals are structurally similar, misidentification was likely. Only in the last ten years have methods become available for reliable talc measurement. Mineralogical methods were used to measure talc particulates and not histological techniques. Ovary tissues may have been removed by physicians using gloves contaminated with talc (though in the second study, ovarian tissue was removed with forceps only). Talc granulomas following surgery due to talc on gloves has been reported, but no granulomas were reported in Henderson's studies, raising questions about what particulates Henderson actually observed.

There have been 9 epidemiological studies of the relationship between talc use and ovarian cancer. Two studies showed a statistically significant increase in cancer incidence, the other studies showed a negative correlation. The risk of ovarian cancer prior to 1960 was greater than after 1960. This could be due to the reduction of asbestos fibers in talc due to modern processing techniques. Epidemiological studies suggest a small risk of ovarian cancer for talc

users: 1.3 relative risk where 1.0 is equivalent to no risk. There are a number of confounders which will influence epidemiological studies including race, marital status, age, education, history of tubal ligation, use of oral contraceptives, and asbestos exposure. Inherent bias of epidemiological studies were also mentioned including inaccurate interview information (eg. recollection).

A six fold increase in ovarian cancer has been identified between women in the U.S. and Japan. This may be attributed to dietary fat intake.

General Conclusion: Additional information is needed to make a definitive conclusion about talc use and ovarian cancer. Presently the increased risk of ovarian cancer due to talc exposure is a hypothesis which remains to be tested.

Donald C. Havery

Talc: *(Purpose: As a follow-up to the 1994 talc symposium, to identify the chemical composition of talc, and to evaluate the identity of the material used in the NTP study on the carcinogenicity of talc particles in mice)* F. Hurley continued writing up a review of CTFA's comments to the citizen's petition relating to talc. A copy of the petition itself was obtained for review.

N-Nitrosamines: D. Havery, R. Yates, and H. Chou continued worked on a malfunctioning Thermal Energy Analyzer instrument used for N-nitrosamine analysis. It was determined that the photomultiplier tube had cracked and was bad. Fortunately we have a spare, since a new tube costs $2,000.

Other: R. Yates drafted an annual report on the activities of this project in FY95.

D. Havery drafted a letter to a scientist in The Netherlands in response to a request for a sample of 2-ethylhexyl 4-(N-nitroso-N-methylamino) benzoate. The letter was finalized. and the sample was mailed.

G. Black continued working on the inventory of CTEB's chemicals and cosmetic raw materials.

Manuscript Status: (Status changes indicated in bold type)

Accepted by the Journal:

"Determination of 2-Ethylhexyl 4-(N-methyl-N-nitrosamino) Benzoate in Commercial Sunscreens and Cosmetic Products" (Galley reviewed; publication scheduled for the November/December issue)

Under review by Technical Editing:

"Nitro musks in fragrance products - An update of FDA findings"

Under Review at the Branch level:

"A Rapid Method for the Determination of Nitrosating Agents in Cosmetic Products by Chemiluminescence Detection of Nitric Oxide"

"Determination of Formaldehyde Donating and Paraben Preservatives in Cosmetic Products by Solid Phase Extraction"

"Surveys of Commercial Fragrance Products from 1985-1992 for Nitro Musks"

"Determination of musk ambrette, musk xylol, and musk ketone in fragrance products by capillary gas chromatography with electron capture detection"

"Determination of 1,4-dioxane in ethoxylated cosmetic raw materials and in cosmetic finished products"

"Determination of contaminants in fatty acid diethanolamides"

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June 30,1994

Dr.John Bailey, Director
Office of Cosmetics and Colors
Food and Drug Administration
200 C Street, S.W.
Washington, D.C. 20204

Dear John:

As agreed, I am enclosing a confidential prepublication manuscript of my review article titled "Biological Effects of Cosmetic Talc". The manuscript has been accepted for publication in FOOD AND CHEMICAL TOXICOLOGY. Please do not quote or refer to it until it has been published.

As discussed, I am also enclosing for your ready reference several reprints on animal studies in which I was personally involved as project director and toxicologist. The talc inhalation studies in hamsters show that no talc-induced lesions -- not even fibrosis -- developed in the exposed animals at the selected talc aerosol concentrations which -- although 30 to 1700 times those of median infant exposures -- were below those causing lung overload conditions. The Lovelace study was criticized at the January 31/February 1 FDA workshop because even the low-dose exposure (6 mg/m^3) resulted in a lung overload.

As to translocation of highly insoluble particles from the vagina to the ovaries without inadvertent or deliberate assistance, several studies, including our own, were unable to show any such migration. The results of several others, seemingly indicating translocation, can be plausibly explained in most cases by other phenomena, such as false positives (Egli and Newton,1961); Trendelenberg position of patients and multipara with lacerated cervix (DeBoer,1972); radionuclide leached from the particles rather than translocated particles (Venter and Iturralde,1979); etc. Yet, talc particles have been reported in human ovaries (e.g.,Henderson et al, 1971, 1978, 1979). To the best my knowledge it remains unexplained how highly insoluble

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inanimate particles without locomotion of their own and unable to respond to chemotactic stimuli can breach the formidable cervical barrier and "swim upstream" against menstrual flow and the beat of the cilia in the oviducts to reach the ovaries, seemingly defying the laws of physics. It is noteworthy that none of the investigators having reported an association between hygienic talc use and ovarian cancer is claiming a causal relationship.

Please contact me if you have any questions.

Sincerely

Dr.Alfred P.Wehner

C T F A

THE COSMETIC, TOILETRY, AND FRAGRANCE ASSOCIATION

E. EDWARD KAVANAUGH
PRESIDENT

September 9, 1994

Donald C. Havery
Office of Cosmetics and Colors
Food and Drug Administration
200 C Street, S.W.
Washington, DC 20204

Dear Mr. Havery,

Thank you for your letter of inquiry dated June 7, 1994. I have responded previously (June 8, 1994) by forwarding you a copy of the manuscript entitled *Talc: Occurrence, Characterization and Consumer Applications (Zazenski et al., 1994)*. We have since made some minor revisions to the manuscript (enclosed).

The answers to the specific questions in your letter are as follows:

> ***[It was] mentioned at the [ISRTP] Talc Symposium that cosmetics grade talc is 200 mesh, and that it goes through a process to give 90-95% pure talc. In the CTFA Compendium Specifications, talc is defined as "..... containing no detectable fibrous, asbestos minerals". Is this the specification for cosmetic grade talc presently used in the industry?***
>
> *Answer: Yes.*
>
> ***Does the cosmetic industry run QC tests for asbestos in the talc they use?***
>
> *Answer: Yes, both suppliers and manufacturers of finished talc-containing products run QC tests to confirm the absence of asbestos.*
>
> ***Do talc producers certify batches of talc for composition and fiber content? If so how long have they been doing this? Do they use x-ray diffraction as suggested by the CTFA?***

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[redacted]

Johnson & Johnson
CONSUMER PRODUCTS COMPANY

12789

Addl —

(b) (5) [redacted]

VIA FEDERAL EXPRESS

February 26, 1999

John Bailey, PhD.
Director, Division of Colors and Cosmetics
CFSAN
Food and Drug Administration
200 "C" Street
Washington, DC 20204

Dear Dr. Bailey:

Enclosed please find a copy of Talc: An Overview published in *Comments on Technology, Vol.6 Number 5, 1998.*

I am sending this to you because it is not on the Lexis/Nexus database.

We are very concerned about the proposed amendment of State of New York Senate Bill 1462, that mandates a safety warning on cosmetic talc products (copy attached).

We hope that this recent overview of talc safety will be of assistance to you in preparing the Agency position on this bill.

Please call me at (908) 874-1337 if you have any questions.

Yours truly,

Marjorie B. McTernan
Director Regulatory Affairs

Division of Johnson & Johnson Consumer Companies, Inc.
199 Grandview Road, Skillman, NJ 08558-9418 (908) 874-1000

S1462 HEVESI

SB1462

STATE OF NEW YORK

1462

1999-2000 Regular Sessions

IN SENATE

January 22, 1999

Introduced by Sen. HEVESI -- read twice and ordered printed, and when printed to be committed to the Committee on Consumer Protection

AN ACT to amend the general business law, in relation to labeling of cosmetic talc products

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The general business law is amended by adding a new section 399-y to read as follows:

§ 399-y. Labeling of cosmetic talc products. 1. No person, firm or corporation shall sell or offer for sale any cosmetic talc product unless there is printed on the package in which such talc product is sold or offered for sale a warning label, prominently displayed, which states, "Talcum powder causes cancer in laboratory animals. Frequent talc application in the female genital area increases the risk of ovarian cancer."

2. Any violation of this section shall be punishable by a civil penalty not to exceed one thousand dollars.

§ 2. This act shall take effect 120 days after it shall have become a law.

EXPLANATION--Matter in *italics* (underscored) is new; matter in brackets [-] is old law to be omitted.

LBD06700-01-9

PRESCRIBING INFORMATION **NDC 63256-200-04**

STERILE TALC POWDER

FDA FINAL VERSION

For Intrapleural Administration Only

DESCRIPTION

Sterile Talc Powder is a sclerosing agent intended for intrapleural administration supplied in a single use 100 mL brown glass bottle, sealed with a gray, 20 mm stopper and covered with a flip-off seal. Each bottle contains a minimum of 5.0 g of Talc *USP* (Ultra 2000 Talc), either white or off-white to light gray, asbestos-free and brucite-free grade of talc of controlled particle size. The composition of the talc is ≥ 95% talc as hydrated magnesium silicate. The empirical formula of talc is (b) (4) with a molecular weight of (b) (4) Associated naturally occurring minerals include (b) (4) (b) (4) , (b) (4) ((b) (4) (b) (4) , (b) (4) (b) (4) and (b) (4) Talc is practically insoluble in water and in dilute solutions of acids and alkali hydroxides. The finished product has been sterilized by gamma irradiation.

CLINICAL PHARMACOLOGY

Mechanism of Action

The therapeutic action of talc instilled into the pleural cavity is believed to result from induction of an inflammatory reaction. This reaction promotes adherence of the visceral and parietal pleura, obliterating the pleural space and preventing reaccumulation of pleural fluid.

The extent of systemic absorption of talc after intrapleural administration has not been adequately studied. Systemic exposure could be affected by the integrity of the pleural surface, and therefore could be increased if talc is administered immediately following lung resection or biopsy.

CLINICAL STUDIES

The data demonstrating safety and efficacy of talc slurry administered via chest tube for the treatment of patients with malignant pleural effusions are from the published medical literature. The following prospective, randomized studies were designed to evaluate the risk of recurrence of malignant pleural effusions in patient with a variety of solid tumors. The studies compared talc slurry, instilled into the pleural cavity via chest tube, versus a concurrent control. In all studies, after maximal drainage of the pleural effusion, the investigator administered talc slurry via the chest tube. Chest films documented response (defined as lack of recurrence of fluid for a period of time). Studies differed on the timing of the efficacy assessment. Zimmer *et al*. did not

specify the time required evaluations. Ong *et al.* specified the assessment at one month. Sorensen *et al.* specified the assessment at 3-4 months. The remaining studies assessed response at the completion of the follow-up period.

Randomized Controlled Trials Using Talc Slurry as a Sclerosing Agent

REFERENCE	TREATMENT	RESPONSE RATE EVALUABLE PTS* p value*	RESPONSE RATE ALL PTS* p value*
Sorensen *et al.* Eur J Respir Dis. 1984: 65(2):131-5	Talc Slurry 10g /250ml NS vs. Chest tube drainage alone	100% (9/9) vs. 58% (7/12) p=0.04	64% (9/14) vs. 41% (7/17) p=0.29
Noppen *et al*. Acta Clin Belg 1997; 52(4):258-62	Talc Slurry 5g/50-ml NS vs. Bleomycin 1mg/kg/50ml NS	79% (11/14) vs. 75% (9/12) p=1.00	79% (11/14) vs. 75% (9/12) p=1.00
Zimmer PW *et al.* Chest 1997; 112(2):430-434	Talc Slurry 5g/50 ml NS[c] vs. Bleomycin 60U/50 ml NS[c]	90% (17/19[b]) vs. 79% (11/14[b]) p=0.63	Not Given
Ong KC *et al.* Respirology 2000;5;99-103	Talc Slurry 5g/150ml NS[d] vs. Bleomycin 1U/kg/150 ml NS[d]	89% (16/18) vs. 70% (14/20) p=0.24	64% (16/25) vs. 56% (14/25) p=0.77
Yim AP *et al.* Ann Thorax Surg 1996; 62:1655-8	Talc Slurry 5g/50ml NS, lidocaine 2% 10 ml vs. Talc Insufflation 5g powder	90%(26/29) vs. 96% (27/28) p=0.61	90% (26/29) vs. 96% (27/28) p=0.61

* Two-sided p-value based on Fisher's exact test

[a] Patients were evaluable if chest x-rays were done to assess response per protocol. The Sorensen study excluded patients if incomplete lung re-expansion was noted post drainage.

[b] Data per procedure (33 procedures in 29 evaluable patients, 3 patients with bilateral effusions).

[c] Plus lidocaine 1%, 20 ml.

[d] Plus lidocaine 1%, 10 ml.

In single-arm studies of malignant pleural effusions from the published literature, variously defined "success" rates using talc slurry pleurodesis ranged from 75% to 100%.

INDICATIONS AND USAGE

Sterile Talc Powder, administered intrapleurally via chest tube, is indicated as a sclerosing agent to decrease the recurrence of malignant pleural effusions in symptomatic patients.

CONTRAINDICATIONS

None known

WARNINGS

None

PRECAUTIONS

1. **Future procedures:** The possibility of the future diagnostic and therapeutic procedures involving the hemithorax to be treated must be considered prior to administering Sterile Talc Powder. Sclerosis of the pleural space may preclude subsequent diagnostic procedures of the pleura on the treated side. Talc sclerosis may complicate or preclude future ipsilateral lung resective surgery, including pneumonectomy for transplantation purposes.

2. **Use in potentially curable disease:** Talc has no known antineoplastic activity and should not be used alone for potentially curable malignancies where systemic therapy would be more appropriate, e.g., a malignant effusion secondary to a potentially curable lymphoma.

3. **Pulmonary complications:** Acute Pneumonitis and Acute Respiratory Distress Syndrome (ARDS) have been reported in association with intrapleural talc administration. Three of the case reports of ARDS have occurred after treatment with a relatively large talc dose (10 g) administered via intrapleural chest tube instillation. One patient died one month post treatment and two patients recovered without further sequelae.

DRUG INTERACTIONS

It is not known whether the effectiveness of a second sclerosing agent after prior talc pleurodesis would be diminished by the absorptive properties of talc.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Studies on the carcinogenicity of talc have been performed using non-standard designs which prevent firm conclusions on its carcinogenicity. With single intraperitoneal administration to mice at 20 mg and observation for at least 6 months or 4 weekly doses administered intraperitoneally at 25 mg/dose to rats with observation for at least 84 weeks, tumor incidence was not increased. In these studies the talc

and its asbestos content were not characterized.

Genotoxicity was tested in cultures of rat pleural mesothelial cells (RPMC) as unscheduled DNA synthesis (UDS) and sister chromatid exchanges (SCEs). None of the talc samples (which were asbestos-free) induced enhancement of UDS or SCEs in treated cultures. No information is available on impairment of fertility in animals by talc.

Pregnancy: Pregnancy Category B. An oral administration study has been performed in the rabbit at 900 mg/kg. Approximately 5 fold higher than a human dose on mg/m^2 basis, and has revealed no evidence of teratogenicity due to talc. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should not be used during pregnancy unless the benefit outweighs the risk.

Pediatric Use: The safety and efficacy of Sterile Talc Powder in pediatric patients have not been established.

Geriatric use: The estimated mean and median ages of patients treated with talc slurry from clinical studies (single-arm or randomized) were 60 and 62 years, respectively. No analyses to specifically evaluate the safety and efficacy in the geriatric population have been reported.

ADVERSE REACTIONS

Intrathoracic administration of talc slurry has been described in medical literature reports involving more than 2000 patients. Patients with malignant pleural effusions were treated with talc via poudrage or slurry. In general, with respect to reported adverse experiences, it is difficult to distinguish the effects of talc from the effects of the procedure(s) associated with its administration. The most often reported adverse experiences to intrapleurally-administered talc were fever and pain.

Infection: Complications reported include empyema.

Respiratory: Complications reported include hypoxemia, dyspnea, unilateral pulmonary edema, pneumonia, ARDS, brochopleural fistula, hemoptysis and pulmonary emboli.

Cardiovascular: Complications reported included tachycardia, myocardial infarction**,** hypotension, hypovolemia, and asystolic arrest

Delivery Procedure: Adverse reactions due to the delivery procedure and the chest tube may include: pain, infection at the site of thoracostomy or thoracoscopy, localized bleeding, and subcutaneous emphysema.

Chronic Toxicity: Since patients in clinical studies had a limited life expectancy, data on chronic toxicity are limited

OVERDOSAGE

No definite relationship between dose and toxicity has been established. Excessive talc may be partially removed with saline lavage.

DOSAGE AND ADMINISTRATION

Sterile Talc Powder should be administered after adequate drainage of the effusion. The success of the pleurodesis appears to be related to the completeness of the drainage of the pleural fluid, as well as the full re-expansion of the lung, both of which will promote symphysis of the pleural surfaces.

The recommended dose is 5 g, dissolved in 50 - 100 ml Sodium Chloride Injection, *USP*. Although the optimal dose for effective pleurodesis is unknown, 5 g was the dose most frequently reported in the published literature.

Talc Preparation

Prepare the talc slurry using aseptic technique in an appropriate laminar flow hood. Remove talc container from packaging. Remove protective flip-off seal.

Each brown bottle contains 5 g of Sterilized Talc Powder. To dispense the contents:

1. Using a 16 gauge needle attached to a 60-ml LuerLok syringe, measure and draw up 50 ml of Sodium Chloride Injection, *USP*. Vent the talc bottle using a needle. Slowing inject the 50 ml of Sodium Chloride Injection, *USP* into the bottle. For doses more than 5 g, repeat this procedure with a second bottle.

2. Swirl the bottle(s) to disperse the talc powder and continue swirling to avoid settling of the talc in the slurry. Each bottle will contain 5 g Sterile Talc Powder dispersed in 50 ml of Sodium Chloride Injection, *USP*.

3. Divide the content of each bottle into two 60 ml irrigation syringes by withdrawing 25 ml of the slurry into each syringe with continuous swirling. QS each syringe with Sodium Chloride Injection, *USP* to a total volume of 50 ml in each syringe. Draw air into each syringe to the 60 ml mark to serve as a headspace for mixing prior to administration.

4. When appropriately labeled, each syringe contains 2.5 g of Sterile Talc in 50 ml of Sodium Chloride Injection, *USP* with an air headspace of 10 ml. Once the slurry has been made, use within 12 hours or discard and prepare fresh slurry. Label the syringes appropriately noting the expiration date and time, with the statement “For Pleurodesis Only – NOT FOR IV ADMINISTRATION,” the identity of the patient intended to receive this material and a

cautionary statement to SHAKE WELL before use.

5. Prior to administration, completely and continuously agitate the syringes to evenly redisperse the talc and avoid settlement. Immediately prior to administration, vent the 10 ml air headspace from each syringe.

6. Attach the adapter and place a syringe tip on the adapter. Maintain continuous agitation of the syringes.

NOTICE: Shake well before installation. Each 25 ml of prepared slurry in the syringe contains 1.25 g of talc. NOT FOR IV ADMINISTRATION.

Administration

Administer the talc slurry through the chest tube by gently applying pressure to syringe plunger and empty the contents of the syringe into the chest cavity. After application, discard the empty syringe according to general hospital procedures. After the talc slurry has been administered through the chest tube into the pleural cavity, the chest tube may be flushed with 10- 25 ml sodium chloride solution to ensure that the complete dose of talc is delivered.

Following introduction of the talc slurry, the chest drainage tube is clamped, and the patient is asked to move, at 20 to 30 minute intervals, from supine to alternating decubitus positions, so that over a period of about 2 hours the talc is distributed within the chest cavity. Recent evidence suggests that this step may not be necessary.

At the end of this period, the chest drainage tube is unclamped, and the excess saline is removed by the routine continual external suction on the tube.

HOW SUPPLIED

NDC 63256-200-04 Sterile Talc Powder is supplied in a 100 ml brown glass bottle containing 5 g of talc. The sterile bottle is closed with a gray stopper and covered with a flip-off seal.

Storage: Store at Room Temperature (18-25°C). Protect against sunlight.

DISTRIBUTED BY: (b) (4) [redacted]

Version: Original September 2003

Lipnicki, John

From: Katz, Linda
Sent: Friday, May 07, 2004 12:35 PM
To: Stone, Theresa H
Cc: Castro, Veronica; Katz, Linda
Subject: FW: Cosmetics Questions

See responses below. If you need any additional information, please let me know.

Why is talc, a known carcinogen, still allowed in cosmetics?

FDA does not have premarket approval authority for cosmetic products or ingredients (with the exception of color additives). Thus, it is the responsibility of the manufacturer to assess cosmetic products before marketing to assure that they fully comply with all applicable laws and regulations that we enforce, regarding safety. If the safety of the product (or any of the ingredients) has not been substantiated prior to marketing, then the following statement must appear conspicuously on the principal display panel for the product: "Warning--The safety of this product has not been determined." (See 21 CFR 740.10(a)).

According to the National Toxicology Program (NTP), its initial review of talc for possible listing in the 10th Edition of the Report on Carcinogens (RoC) found that there is some confusion in the scientific literature over the mineral nature and consequences of exposure to talc, both containing asbestiform fibers and not containing asbestiform fibers. The NTP decided to defer consideration of listing talc in the 10th RoC and a careful review of the literature on these materials is underway to determine if a clear definition of the agent or agents involved in human exposures can be developed. [http://ntp-server.niehs.nih.gov/NewHomeRoc/Talcstatus.html]

How does the FDA decide what can be considered a trade secret? (This answer is applicable only to cosmetics.)

FDA grants this status under very limited circumstances and after careful review of the manufacturer's data. The manufacturer must prove that the ingredient imparts some unique property to a product and that the ingredient is not well-known in the industry. FDA considers, among other things, scientific or technical data, reports, tests, and other relevant information that address several specific factors (see 21 CFR 720.8) about whether the identity of an ingredient qualifies as a trade secret. Requests for confidentiality of cosmetic ingredients are handled in accordance with the procedures in 21 CFR 720.8 and 21 CFR 20.44.

What chemicals are considered trade secrets? Is there any way consumers can find out what these ingredients are?

A determination of confidentiality of a trade secret by FDA, in accordance with 21 CFR 20.44, means that such data or information will not be made available for public disclosure unless the agency is ordered to do so by a court.

Why aren't all fragrance ingredients listed?

In response to comments submitted before publication of the final

regulation on ingredient labeling on October 17, 1973 (38 FR 28912), the agency concluded that listing all ingredients of fragrances (which might contain 20 or more ingredients) would be impractical and could distract from the listing of other, more significant ingredients.

As of April 19, 2001, the FDA said it was evaluating study data from a CDC report on phthalates to determine whether the levels described by the CDC report are a health concern. Has the agency finished studying that data? If so, what is the conclusion?

FDA reviewed the safety/toxicity data (including the CDC data) for phthalates in 2001 and 2002 as the Cosmetic Ingredient Review (CIR) Expert Panel was conducting its review of the safety of dibutylphthalate. (The CIR is an industry-sponsored organization that reviews cosmetic ingredient safety and publishes its results in open, peer-reviewed literature.) In November 2002, the CIR reaffirmed its original conclusion that dibutyl phthalate is safe as used in cosmetic ingredients. The panel concluded that exposures to phthalates from cosmetics are low compared to levels that would cause adverse effects in animals. Therefore, there is a high margin of safety between exposure to cosmetics and doses that cause observable toxicity in animal tests. This conclusion appears reasonable in light of the currently available data and FDA does not believe that users of cosmetic products containing phthalates are at risk for adverse effects. However, FDA continues to monitor the situation in case new data appears that suggests a significant level of risk.

The CDC report only noted levels of phthalates excreted in urine. It did not establish any association between phthalates and health risks to humans, nor the source of the exposure, nor any association between the use of cosmetics and health risks.

Is the FDA planning for follow the EU in banning phthalates from nail polishes?

As stated above, under the law, cosmetic products and ingredient are not subject to premarket approval. A cosmetic (other than coal-tar hair dyes, which the law treats differently) would be considered adulterated, and subject to action by FDA, if it contained a substance that is "poisonous or deleterious." However, at this time, FDA does not have evidence that phthalates, as used in cosmetics, pose a safety risk.

Are there any chemicals that the FDA has banned from cosmetics?

The use of the following ingredients in cosmetics is prohibited or restricted by regulation (21 CFR part 700): hexachlorophene, mercury compounds, chlorofluorocarbons, bithionol, halogenated salicylanilides, chloroform, vinyl chloride, zirconium-containing complexes, and methylene chloride. FDA promulgated these regulations through the notice and comment public rulemaking process when it had convincing evidence regarding health concerns associated with these ingredients.

Linda M. Katz, M.D., M.P.H.
Director, Office of Cosmetics and Colors
Food and Drug Administration
Center for Food Safety and Applied Nutrition
5100 Paint Branch Parkway, HFS-100
College Park, Maryland 20740
202- 418-3412

-----Original Message-----
From: Castro, Veronica

Bailey, Catherine J

From: Meyers, Beth
Sent: Thursday, July 29, 2004 2:36 PM
To: Bailey, Catherine J
Subject: FW: Cosmetics Questions/Phthalates

Kitty,

The message below (see section in blue) may be ~~the phthalates~~ one of the phthalates communications that have come up since the fact sheet and talking points were developed. I'll see what I can do with the most recent inquiry.

Beth

-----Original Message-----
From: Lipnicki, John
Sent: Friday, May 07, 2004 10:20 AM
To: Meyers, Beth
Subject: FW: Cosmetics Questions

Beth,

(b) (5) [redacted]

[redacted] Please forward the complete draft to Linda when final with a cc to me. Thanks again.

John

Why is talc, a known carcinogen, still allowed in cosmetics?

Generally speaking, since FDA does not have premarket approval authority for cosmetic products or their labels, it remains the responsibility of the manufacturer to assure that each ingredient used in a cosmetic product and each finished cosmetic product be adequately substantiated for safety prior to marketing so that they fully comply with all applicable laws and regulations that we enforce (e.g., cosmetics are safe and properly labeled). If the safety of the product (or any of the ingredients) has not been substantiated prior to marketing, then the following statement must appear conspicuously on the principal display panel for the product: "Warning--The safety of this product has not been determined." (See 21 CFR 740.10(a)).

According to the National Toxicology Program (NTP), its initial review of talc for possible listing in the 10th Edition of the Report on

Carcinogens (RoC) found that there is some confusion in the scientific literature over the mineral nature and consequences of exposure to talc, both containing asbestiform fibers and not containing asbestiform fibers. The NTP decided to defer consideration of listing talc in the 10th RoC and a careful review of the literature on these materials is underway to determine if a clear definition of the agent or agents involved in human exposures can be developed. [http://ntp-server.niehs.nih.gov/NewHomeRoc/Talcstatus.html]

How does the FDA decide what can be considered a trade secret?

FDA grants this status under very limited circumstances and after careful review of the manufacturer's data. The manufacturer must prove that the ingredient imparts some unique property to a product and that the ingredient is not well-known in the industry. FDA considers, among other things, scientific or technical data, reports, tests, and other relevant information that address several specific factors (see 21 CFR 720.8) about whether the identity of an ingredient qualifies as a trade secret. Requests for confidentiality of cosmetic ingredients are handled in accordance with the procedures in 21 CFR 720.8 and 21 CFR 20.44.

What chemicals are considered trade secrets? Is there any way consumers can find out what these ingredients are?

A determination of confidentiality of a trade secret by FDA, in accordance with 21 CFR 20.44, means that such data or information will not be made available for public disclosure unless the agency is ordered to do so by a court.

Why aren't all fragrance ingredients listed?

In response to comments submitted before publication of the final regulation on ingredient labeling on October 17, 1973 (38 FR 28912), the agency concluded that listing all ingredients of fragrances (that perhaps contain 20 or more ingredients) would be impractical and could distract from the listing of other, more significant ingredients.

As of April 19, 2001, the FDA said it was evaluating study data from a CDC report on phthalates to determine whether the levels described by the CDC report are a health concern. Has the agency finished studying that data? If so, what is the conclusion? Is the FDA planning for follow the EU in banning phthalates from nail polishes?

FDA reviewed the safety/toxicity data (including the CDC data) for phthalates in 2001 and 2002 as the Cosmetic Ingredient Review (CIR) Expert Panel was conducting its review of the safety of dibutylphthalate. (The CIR is an industry-sponsored organization that reviews cosmetic ingredient safety and publishes its results in open, peer-reviewed literature.) In November 2002, the CIR reaffirmed its original conclusion that dibutyl phthalate is safe as used in cosmetic ingredients. The panel concluded that exposures to phthalates from cosmetics are low compared to levels that would cause adverse effects in animals. Therefore, there is a high margin of safety between exposure to cosmetics and doses that cause observable toxicity in animal tests. This conclusion appears reasonable in light of the currently available data and FDA does not believe that users of cosmetic products containing phthalates are at risk for adverse effects.

However, FDA continues to monitor the situation in case new data appears that suggests a significant level of risk.

The CDC report only noted levels of phthalates excreted in urine. It did not establish any association between phthalates and health risks to humans, nor the source of the exposure, nor any association between the use of cosmetics and health risks.

Are there any chemicals that the FDA has banned from cosmetics?

The use of the following ingredients in cosmetics is prohibited or restricted by regulation (21 CFR part 700): hexachlorophene, mercury compounds, chlorofluorocarbons, bithionol, halogenated salicylanilides, chloroform, vinyl chloride, zirconium-containing complexes, and methylene chloride. FDA promulgated these regulations through the notice and comment public rulemaking process when it had convincing evidence regarding health concerns associated with these ingredients.

-----Original Message-----
From: Katz, Linda
Sent: Thursday, May 06, 2004 1:16 PM
To: Lipnicki, John; Meyers, Beth
Subject: FW: Cosmetics Questions

Beth & John –

See questions below. (b) (5) [redacted]

Linda

-----Original Message-----
From: Castro, Veronica
Sent: Thursday, May 06, 2004 11:40 AM
To: Katz, Linda
Cc: Stone, Theresa H
Subject: RE: Cosmetics Questions

Linda,

Please see below. Do you have time to prep Diana (PAS in NY-DO) before her interview next week? If not, can someone in OCC do it?

Thanks
Veronica

-----Original Message-----
From: Stone, Theresa H
Sent: Thursday, May 06, 2004 11:36 AM
To: Castro, Veronica
Subject: RE: Cosmetics Questions

I do think that if Diana does the interview, you'll need some backgrounding on some of the issues the reporter is interested in. (b) (5) [redacted]

-----Original Message-----
From: Castro, Veronica
Sent: Thursday, May 06, 2004 11:33 AM
To: Stone, Theresa H

Subject: RE: Cosmetics Questions

Oh, OK. The reporter contacted me this morning and asked for status. I told her that I'd forwarded the request to you and should have an answer for her today. Let me know if you need anything else from me.

-----Original Message-----
From: Stone, Theresa H
Sent: Thursday, May 06, 2004 11:31 AM
To: Castro, Veronica; Monaco, Diana D
Subject: RE: Cosmetics Questions

Veronica, my question was addressed to Diana, not you. I think it would be better if she contacted the reporter herself to set up a time next week.

-----Original Message-----
From: Castro, Veronica
Sent: Thursday, May 06, 2004 11:07 AM
To: Stone, Theresa H
Subject: RE: Cosmetics Questions

I will do that. Will they come to Diana's office? If so, I need her address.

-----Original Message-----
From: Stone, Theresa H
Sent: Thursday, May 06, 2004 10:44 AM
To: Monaco, Diana D
Cc: Castro, Veronica
Subject: RE: Cosmetics Questions

Is it possible for you to just call the reporter today, and set up a time for early next week?

-----Original Message-----
From: Monaco, Diana D
Sent: Thursday, May 06, 2004 8:45 AM
To: Stone, Theresa H
Subject: RE: Cosmetics Questions

I just rec'd this - (Thursday AM) - I was out yesterday and out tomorrow and booked today - which means if it is really for this week I cannot - but I am happy to do it next week.(Mon Tues or Thurs)

Let me know - Diana

"The contents of this message are mine personally and don't reflect any position of the Government or FDA."
Diana D. Monaco, RD, CDN
Public Affairs Specialist
FDA - NY District
Olympic Towers, Suite 100
300 Pearl Street
Buffalo, NY 14202
716-541-0318
FAX:716-551-3845

-----Original Message-----
From: Stone, Theresa H
Sent: Wednesday, May 05, 2004 8:59 AM
To: Monaco, Diana D
Cc: Castro, Veronica

Subject: FW: Cosmetics Questions

(b) (5) [redacted] Just let me know.

-----Original Message-----
From: Castro, Veronica
Sent: Wednesday, May 05, 2004 8:21 AM
To: Stone, Theresa H
Cc: Katz, Linda
Subject: FW: Cosmetics Questions

Theresa,

Please see below.

-----Original Message-----
From: Tara Moncheck [mailto:tara.moncheck@wten.com]
Sent: Tuesday, May 04, 2004 4:38 PM
To: vcastro@oc.fda.gov
Subject: Cosmetics Questions

Dear Veronica,

As per our phone conversation yesterday, here are some questions I'd like to discuss during an interview. Please let me know if someone from the FDA is available in the Albany, NY area this week. If so, we would like to set up an on-camera interview.

Why is talc, a known carcinogen, still allowed in cosmetics?

How does the FDA decide what can be considered a trade secret?

What chemicals are considered trade secrets?

Is there any way consumers can find out what these ingredients are?

As of April 19, 2001, the FDA said it was evaluating study data from a CDC report on phthalates to determine whether the levels described by the CDC report are a health concern. Has the agency finished studying that data? If so, what is the conclusion?

Is the FDA planning for follow the EU in banning phthalates from nail polishes?

Why aren't all fragrance ingredients listed?

Are there any chemicals that the FDA has banned from cosmetics?

Thanks for your help!

Sincerely,
Tara Moncheck
NEWS10 Investigates Producer
518-433-4229
518-433-4291 - Fax

MessageFrom: Bailey, Catherine J
Sent: Monday, August 15, 2005 6:38 AM
To: Meyers, Beth
Cc: Lipnicki, John
Subject: FW: Talcum powder

For the files.
Thanks.

-----Original Message-----
From: Milstein, Stanley R
Sent: Friday, August 12, 2005 6:20 PM
To: 'Jennifer Butler'
Cc: Lipnicki, John; Bailey, Catherine J; Katz, Linda; Holman, Matthew Ray; 'Luisa_Carter-Phillips@hc-sc.gc.ca'
Subject: RE: Talcum powder

Hi, Jennifer!

I have looked for information that would be responsive to your inquiry. Here is what I have been able to find:

General:

FDA regulates cosmetics and color additives under the 1938 Federal Food, Drug, and Cosmetic Act (FFDCA), as well as the 1960 Color Additive Amendments to the Act and the 1966 Fair Packaging and Labeling Act (FPLA). Our mandate for cosmetics and their ingredients, however, does not include pre-market approval nor pre-market notification authority; all color additives used in FDA-regulated products, however, are subject to pre-market approval.

Talc: Cosmetic Ingredient, Drug Ingredient, and Color Additive

Talc is a bonafide cosmetic ingredient; it is monographed in the CTFA International Cosmetic Ingredient Dictionary (ICID) and also appears in the U.S. Pharmacoepia (USP), where specifications are given; the Cosmetic Ingredient Review (CIR) has not conducted a safety assessment for cosmetic talc, to date . According to the FDA 2004 Voluntary Cosmetic Registration Program (21 CFR 720) “Frequency of Use (FoU)” Database, the number of cosmetic products registered with FDA that contain talc as an ingredient were as follows:

014807966 TALC
2157

Talc is also a "batch certification-exempt" color additive that is approved (listed) for use in drug products (and as a substratum for certain drug and cosmetic color additive lakes), and talc may be safely used in such products in amounts consistent with good manufacturing practice to color drugs generally (21 CFR 73.1550); the listing regulation sets specifications for heavy metals (Pb ˜20 ppm; As ˜ 3 ppm)
Talc (sterile) is also approved by FDA under an NDA (21-388) for use as a sclerosing agent (intrapleural administration, pleuradesis), and I am also attaching to this note some information concerning that product.

Talc: Regulatory Status - Drugs, Cosmetics, Devices
There are no warning statements currently required in the codified regulations for talc as a cosmetic ingredient (21 CFR 740), nor are there prohibitions, restrictions, or requirements for tamper-resistant packaging of talc-containing cosmetic products (21 CFR 700).
In 1994, FDA-CFSAN/OCAC co-sponsored with the International Society of Regulatory Toxicology and Pharmacology (ISRTP) a 2-day Workshop on talc, which included presentations from the Agency (cosmetic and drug), industry, occupational, and academic (medical, public health) perspectives. The subjects covered in the Workshop included talc chemistry and characterization, regulatory history and issues, lung/pulmonary exposure, and Ovarian/Perineal Exposure Concerns. The annals of the Workshop were subsequently published in a peer-review journal:

"Talc: Consumer Uses and Health Perspectives", Regulatory Toxicology and Pharmacology, 21 (2), pp. 211-260 (April, 1995).

The several papers presented in the Workshop are provided for your convenience in .pdf (Adobe) format. In the paper by Dr. Gilbertson (FDA-CDER/DOTCDP) on "Regulatory Status", you will find that the issue of additional warnings because of accidental inhalation of baby powders was addressed in the context of the "Skin Protectant Drug Products Monograph" at the proposed rule stage; the issue of use on broken/ abraded skin was also addressed. I would recommend that you contact my colleague at FDA-OCAC, Mr. John Lipnicki, Team Leader, OCAC Regulations and Compliance Team, who may be able to help you further with additional citations, particularly with respect to the status of the final rulemaking. Also, Dr. Matthew Holman (FDA-CDER), who participated in CHIC-3 (Ottawa) can give you the very latest updates re. the status of proposed warnings for talc in OTC drug products categories regulated under the Monograph system.
Finally, with respect to cornstarch as a replacement for talc in 'talcum-type' powders, I would note that, while acute inhalation toxicity issues are always a concern with any fine powder used topically (particularly in an enclosed environment that is inadequately ventilated), cornstarch has some additional areas of potential concern, because of its biological/organic origins, which include microbial contamination (esp., bacterial spores) and potential flammability/explosiveness when the dust exceeds certain environmental thresholds.

I trust that this information is helpful. If there are other questions that you feel have not been sufficiently addressed, please feel free to contact our Office again, and I will be glad to provide additional information and guidance.

Best Personal Regards

Stan Milstein, OCAC

Stanley R. Milstein, Ph.D. (HFS-101)
Office of Cosmetics and Colors
Center for Food Safety and Applied Nutrition (CFSAN)
University Station Building (CPK2)
U.S. Food and Drug Administration (FDA)

4300 River Road
College Park, MD 20740
(Ph): 301 436-1343
(Fax): 301 436-2975
(E-mail): smilstei@cfsan.fda.gov

-----Original Message-----
From: Jennifer Butler [mailto:jennifer_butler@hc-sc.gc.ca]
Sent: Tuesday, August 09, 2005 1:03 PM
To: Stanley.Milstein@cfsan.fda.gov
Subject: Talcum powder

Hi Stanley,

I have a quick question. We are trying to develop a mandatory warning statement for the labels of Talc containing products. We are wondering if FDA has any such statement requirements for Talc products, Talcum powder and/ or corn starch. Of course, the primary concern is inhalation hazards associated with baby powders. Would you have any idea to which concentrations warnings should apply? Also, is exposure to broken or abraded skin a concern? Is any of this information in the Federal Register? If so, where could we find it? Any information is much appreciated.

Thank you in advance,

Jennifer Butler
Scientific Regulatory Officer
Consumer Product Safety Bureau
Cosmetics Division
Health Canada
P: (613) 948-3372
F: (613) 952-3039

From: Hansen, Patricia A
Sent: Tuesday, March 09, 2010 3:09 PM
To: Cianci, Sebastian M
Cc: Gasper, John; Meyers, Beth; Katz, Linda
Subject: FW: Press inquiry - talc

Seb,

Below are our answers. If the reporter has more questions, please forward them to Beth and me, with a cc to John Gasper (staff lead on the talc project). Thanks.

Pat

Patricia A. Hansen, Ph.D.
Sr. Advisor for Science and Policy
Office of Cosmetics and Colors, HFS-100

Tel.: 301-436-1130
Fax: 301-436-2975

1 FDA is conducting a survey of talc and talc-containing cosmetic products to help determine whether, and to what extent, cosmetic products in the U.S. marketplace may be contaminated with asbestos.
2 The current survey is being conducted because the most recent survey of talc in U.S. commerce was conducted many years ago and because there have been recent reports of asbestos-contaminated talc cosmetic products occurring overseas. (Asbestos, a known carcinogen, can be found in talc if the mining site is not carefully selected or if the talc ore is not sufficiently purified.)

3 The survey will use up-to-date laboratory techniques. (Details are not releasable at this time.)
4 The current work will be ongoing through 2010.
5 This survey is focused on asbestos.
6 We do not wish to speculate on what may be motivating the Cosmetic Ingredient Review. We suggest the reporter contact that group directly.
7 We have not received any reports of adverse events associated with talc.

From: Cianci, Sebastian M
To: Katz, Linda
Cc: Meyers, Beth
Sent: Mon Mar 08 17:37:36 2010
Subject: FW: Press inquiry - talc
Linda and Beth,

I received an inquiry from the Rose Sheet (Lauren Nardella). Lauren said she heard John Bailey talk about asbestos at the Personal Care Products Council annual meeting from a few weeks ago. She said John mentioned thatFDA is looking at analyzing talc for asbestos.

She has the following questions, but would really like an interview.

1. Why is FDA is looking into talc?

2. Was there something that prompted this?

3. What process/method are they using to analyze talc?

4. When do they expect to release results?

5. Is it specifically asbestos that that are looking at, or are there other aspects of talc that are of concern?

6. Is it merely coincidental that the Cosmetic Ingredient Review plans to review talc this year as well?

7. Can you tell me about any side effects resulting from exposure to talc in personal care products?

Her deadline is COB tomorrow so it might be faster to do an interview if you are ammenable to that.

Seb

Sebastian Cianci
Public Affairs Specialist
Trade Press Liaison
(301) 436-2291
Sebastian.Cianci@fda.hhs.gov

From: Nardella, Lauren (ELS-WSH) [mailto:L.Nardella@elsevier.com]
Sent: Monday, March 08, 2010 5:29 PM
To: Cianci, Sebastian M
Subject: RE: Press inquiry - talc
Thanks for the response!
I'm interested in learning, why is FDA is looking into talc?
Was there something that prompted this?
What process/method are they using to analyze talc?
When do they expect to release results?
Is it specifically asbestos that that are looking at, or are there other aspects of talc that are of concern?
Is it merely coincidental that the Cosmetic Ingredient Review plans to review

talc this year as well?
Can you tell me about any side effects resulting from exposure to talc in personal care products?

Thank you again Seb, I really appreciate your help!
- Lauren

Lauren Nardella
Reporter - "The Rose Sheet"
Elsevier Business Intelligence
5635 Fishers Lane
Suite 6000
Rockville, MD 20852
240-221-4456
www.therosesheet.com

From: Cianci, Sebastian M [mailto:Sebastian.Cianci@fda.hhs.gov]
Sent: Monday, March 08, 2010 5:23 PM
To: Nardella, Lauren (ELS-WSH)
Subject: RE: Press inquiry - talc

I'd be happy to help you out. What sort of questions do you have?

Sebastian

From: Nardella, Lauren (ELS-WSH) [mailto:L.Nardella@elsevier.com]
Sent: Monday, March 08, 2010 12:46 PM
To: Cianci, Sebastian M
Subject: Press inquiry - talc
Hi Seb,

Hope that all is well with you!

I'm working on a story following up on the Personal Care Products Council annual meeting from a few weeks ago. At the meeting, the Council's EVP of Science John Bailey mentioned that FDA is looking at analyzing talc for asbestos.

I was wondering if I might be able to interview someone at FDA regarding this. My deadline is end-of-day tomorrow.

Many thanks,
Lauren

Lauren Nardella
Reporter - "The Rose Sheet"
Elsevier Business Intelligence
5635 Fishers Lane
Suite 6000

Rockville, MD 20852
240-221-4456
www.therosesheet.com

Memorandum of Meeting

Date: March 22, 2010

Place: FDA, University Station, College Park, MD

Participants:

Visitors:
Rio Tinto: Judy Brown, Raga S. Elim
Barretts Minerals: Kevin D. Porterfield

FDA:
FDA: Linda M. Katz, M.D., M.P.H., Patricia A. Hansen, Ph.D., Robert L. Bronaugh, Ph.D., John Gasper J.D., Fred Hurley, Donald Havery

Subject: Talc

The meeting was held at the request of Rio Tinto, to discuss the January 27, 2010 and February 4, 2010 letters received by Rio Tinto and other talc producers/distributors. Specific issues from the letters that were to be addressed included the use of talc in cosmetics, the information FDA requested in the letters, and what FDA intended to do with the information.

FDA representatives described a general concern about the presence of asbestos in talc. This concern intensified when asbestos was reported last year in Chinese and Korean talc products. They also noted that FDA has limited information about the talc industry's testing procedures, acceptable asbestos levels, and specifications for "cosmetic grade" talc. Further, FDA has no specific data on the Chinese and Korean talc incidents except that the findings were "false positives."

FDA's letters were sent to talc producers listed in the International Cosmetic Ingredient Dictionary as an attempt to target the largest suppliers of "cosmetic" talc. FDA needs the requested information to assure that domestically produced and imported talc products that are sold to U.S. consumers are safe. Once FDA has collected the information requested, FDA will look into the feasibility of potentially issuing guidance to industry.

Industry representatives proposed a "workshop" setting where information on the talc industry could be exchanged rather than putting it in writing. This was later clarified to mean a meeting of those persons, including scientists, who could provide FDA the scientific background and detailed information on mineralogy, processing, and analytical methodology that would address FDA's questions posed in the letter to industry.

Industry representatives indicated that they did not have specific information on the Korean incident, but they were working with the Personal Care Products Council on talc standards and procedures for testing talc for asbestos. They indicated that the findings of asbestos in Chinese

talc were false positives. They offered to provide information on the specific issues and how they were resolved, the methods used, and measures to avoid false positives in the future.

Industry representatives suggested holding a meeting where scientific information could be exchanged. FDA was not adverse to this and suggested that industry will need to arrange for the meeting in writing, provide information on who should attend, and the subject areas to be covered. Industry representatives agreed to send FDA such a letter including an agenda, meeting objectives, and participants.

The Specialty Minerals/Barretts Minerals representative said they did not receive the original FDA letter but they would like to receive one officially. FDA representatives agreed to send them a letter.

Action items:

- FDA to send letter to Specialty Minerals
- Rio Tinto to request additional meeting in writing
- Rio Tinto to submit information to FDA on Chinese talc issues

Drafted: DHavery; 3/22/10
Rev/edit: LMKatz 3/22/10
Rev/edit: JGasper 3/22/10
Rev/edit: FHurley 3/22/10
Rev/edit: BBronaugh 4/19/10
Rev/edit: PHansen; 4/19/10
Rev/edit: LMKatz 4/21/10

From: Diallo, Mame K
To: Owens, Shirelle
Cc: Russ, Wanda
Subject: FW: Needed: Warning Labeling Talcum Power
Date: Monday, October 27, 2014 10:58:45 AM

Hi Shirelle,

I believe this is yours, please log in.

Thanks.

Mame

From: Russ, Wanda
Sent: Monday, October 27, 2014 8:54 AM
To: Diallo, Mame K
Subject: FW: Needed: Warning Labeling Talcum Power

Log in

Wanda Russ

From: Pennington, Caitlin
Sent: Monday, October 27, 2014 8:29 AM
To: Russ, Wanda
Cc: Palmer, Kelly; O'Neill, Jeff
Subject: FW: Needed: Warning Labeling Talcum Power

Caitlin

Caitlin M. Pennington
Program Support Specialist
Office of the Commissioner
Food & Drug Administration
10903 New Hampshire Ave., Silver Spring, MD 20903
Caitlin.Pennington@fda.hhs.gov
Office: 301-796-7064
BB: 301-518-4037

From: (b) (6) [mailto:(b) (6) t@earthlink.net]
Sent: Sunday, October 26, 2014 11:49 AM
To: Commissioner FDA
Subject: Needed: Warning Labeling Talcum Power

Ms. Hamburg:

I am writing regarding inadequate labeling of talcum powder (cosmetics) in U.S.

marketplace where distributors target female hygiene. This website Shower to Shower speaks
to this target advertising.

http://showertoshower.com/

Please don't wait any longer, require transparent labeling of the cosmetics industry about the smoking gun of talcum powder application for female genital hygiene. The FDA has rejected labeling requirements in the past.

I am (b) (6) have used talcum power my teenage and adult life – 45 years - because the ads and alleged safety. A year ago I was diagnosed with advanced (b) (6). I'm a non-smoker and there is no cancer in my family but I have used talc almost daily for personal hygiene all my life. Had I known there was a suspicion of risk (like tampons) I would have had a choice.

Failure to require warning labeling marginalizes the consumers, like myself, who fall into the "30% increase increase in ovarian cancer risk among female talc users" category (American Cancer Society webpage, below). Those of us in this category pay the ultimate price, as advanced ovarian cancer is 80% fatal.

The cosmetics industry will simply continue to "self-regulate" and reporting that their own tests are "inconclusive" which means it is big-money safe while they continue to target market to American female consumers. The target market is someone like me, their very own 45-yr lab rat. See two sources below from American Cancer Society and Ovarian Cancer Research Fund websites.

SOURCES

1- http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/talcum-powder-and-cancer

Excerpt from American Cancer Society website link above:

Studies in humans Ovarian cancer

It has been suggested that talcum powder might cause cancer in the ovaries if the powder particles (applied to the genital area or on sanitary napkins, diaphragms, or condoms) were to travel through the vagina, uterus, and fallopian tubes to the ovary. Several studies in women have looked at the possible link between talcum powder and cancer of the ovary. Findings are mixed, with some studies reporting a slightly increased risk and some reporting no increase.

For any individual woman, the overall increase in risk, if it exists, is likely to be small. For example, one analysis combining data from 16 studies published before 2003 found about a 30% increase in ovarian risk among talc users. The average woman's lifetime risk of ovarian cancer is about 1.4%, so even with a 30% increase, her lifetime risk would be about 1.8%. Still, talc is widely used in many products, so it is important to determine if the increased risk is real. Research in this area continues.

2- **http://www.ocrf.org/news/use-of-talc-based-powder-increases-ovarian-cancer-risk**

Excerpt from Ovarian Cancer Research Fund website link above:

Use of Talc-based Powder Increases Ovarian Cancer Risk

The use of talc-based powder has been associated with an increased risk of ovarian cancer in some, but not all, studies. In a new study published in *Cancer Prevention Research*, researchers found that "genital powder use is a modifiable exposure associated with small-to-moderate increases in risk of most histologic subtypes of epithelial ovarian cancer."

Examining data from thousands of women, the researchers found that genital powder was associated with a modest increased risk of epithelial ovarian cancer. There was no increase in risk among women who used the powder only on other parts of the body.

Thank you,

(b) (6)
[redacted]

State of Wisconsin
Governor Scott Walker

Department of Agriculture, Trade and Consumer Protection
Ben Brancel, Secretary

December 22, 2014

(b) (6)
[redacted]

RE: **File 576617** *(Refer to this number when contacting our agency)*
JOHNSON & JOHNSON INC
PO BOX 767
NEENAH WI 54957

Dear Ms Kilian:

Thank you for contacting the Department of Agriculture, Trade and Consumer Protection concerning Johnson & Johnson Inc.

I have written to the business to try to assist you to find a solution to your complaint. I asked them to review your concerns and then contact me to discuss what may be done to resolve your complaint. The company may also contact you directly.

In addition, some issues in your complaint may be within the authority of the agency listed below, so I am forwarding a copy of your complaint directly to them:

US FOOD AND DRUG ADMINISTRATION
US DEPARTMENT OF HEALTH AND HUMAN SERVICES
10903 NEW HAMPSHIRE AVE
SILVER SPRING MD 20993-0002

Telephone: 301 443-3170
Toll-free: 1-888-463-6332
www.fda.gov

Thank you again for bringing your complaint to our attention.

Sincerely,

Jeffery A. Schnetzler
Consumer Protection Investigator
Bureau of Consumer Protection
Voice Mail: 608 224-5178 Fax: 608 224-4677
E-Mail: Jeffery.Schnetzler@wisconsin.gov
www.facebook.com/wiconsumer

DATCP Hotline

From: (b) (6)
Sent: Friday, December 12, 2014 11:14 PM
To: DATCP Hotline
Subject: DATCP Web: Online Product Safety Complaint Form

Complaint or inquiry received via email/Internet by the Wisconsin Department of Agriculture, Trade, and Consumer Protection. This complaint and the information provided will be used in efforts to resolve the problem and will typically be shared with the party complained against. It may also be used to enforce applicable state laws. Under Wisconsin's Open Records Law, Wis. Stats. sec. 19.31, this complaint will be available for public review upon request.

Today's Date:	12/12/2014
Your information:	
Title:	(b) (6)
First name:	(b) (6)
Middle initial:	(b) (6)
Last name:	(b) (6)
Email address:	(b) (6)
Verify email address:	(b) (6)
Street address:	(b) (6)
Address line 2, or Apt #:	
PO Box:	
City:	(b) (6)
State:	(b) (6)
ZIP code:	(b) (6)
County:	(b) (6)
Home phone:	(b) (6)
Work phone:	
Cell phone:	(b) (6)
Phone me between 8:00 a.m. and 4:00 p.m. at:	Home
Best time to call:	12 pm-anytime

Information of victim if different from above:	
Title:	(b) (6)
First name:	(b) (6)
Middle initial:	(b) (6)
Last name:	(b) (6)
Email address:	
Street address:	
Address line 2, or Apt #:	
PO Box:	
City:	
State:	--Select--
ZIP code:	
County:	
Home phone:	
Work phone:	
Cell phone:	
Phone victim between 8:00 a.m. and 4:00 p.m. at:	
Best time to call:	
Your relationship to the victim:	Mother
Information about your complaint:	
Victim's Age:	21
Gender:	Female
Incident date?	
Product involved:	Johnson & Johnson Baby Talcum Powder
Product model:	
Serial number:	
Do you still have the product?	Yes
Brand name/manufacturer:	Johnson & Johnson

Manufacturer's address:	South building SK-255
Address line 2:	199 Grandview Road
City:	Skillman
State:	NJ
ZIP code:	08558-9901
Country:	USA
Manufacturer's email:	johnson&johnson.com
Manufacturer's website:	johnson&johnson.com
Manufacturer's contact person:	consumer products
Manufacturer's phone:	866-565-2229
Manufacturer's fax:	
Which of the following best describes your first contact with the business?	Radio or TV ad
Where was the product purchased?	Milwaukee
Date of purchase:	
Do you have a receipt?	No
Contact person at place of purchase:	
Phone number:	
Where did you pay the business?	At my home
Amount paid:	
Payment method:	Cash
Did you contact the manufacturer about your complaint?	Yes
Date you contacted manufacturer?	10/17/2014
What happened?	nothing
Have you filed this complaint with another agency?	No
Agency name:	
What happened?	
Have you contacted a private attorney?	Yes

Have you started court action?	No

Please describe the incident or hazard in detail and include a description of any injuries.

My daughter was diagnosed with 4th stage ovarian cancer in 2000 at age 18. She died 11-26-2002 at age 21. She used Johnson & Johnson Baby Talcum Powder from birth to her death. It came to my attention when I heard a tv ad telling how the connection to talcum powder and Ovarian Cancer is related and thousands of women have died from using their product.

Did the injury require medical treatment?	Yes
If yes, please describe:	from diagnosis to death hosptialized

How do you feel this complaint should be resolved?

This should be brought to the attention to the public. There are no warning labels to this date on any talcum products. There are numerous lawsuits pending. I could not hold them responsible because of the time limits of no remaining pathology slides since hospital records are not kept over 10 years. Nobody knows this because it has not brought to the public. Doctors are not aware Mothers are still using baby talc on female babies bottoms to this day. My god these findings are still being used on babies today without the dangers still not known. Somebody has to warn people and stop this company.

By submitting this form, I state that the information contained is true and accurate to the best of my knowledge.

From: Hemphill, Jennifer L
To: Meyers, Beth
Subject: 2015 Conference List
Date: Tuesday, December 16, 2014 11:51:43 AM
Attachments: Draft 2015 Exhibits w-estimated cost (4).docx

Jennifer L. Hemphill

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